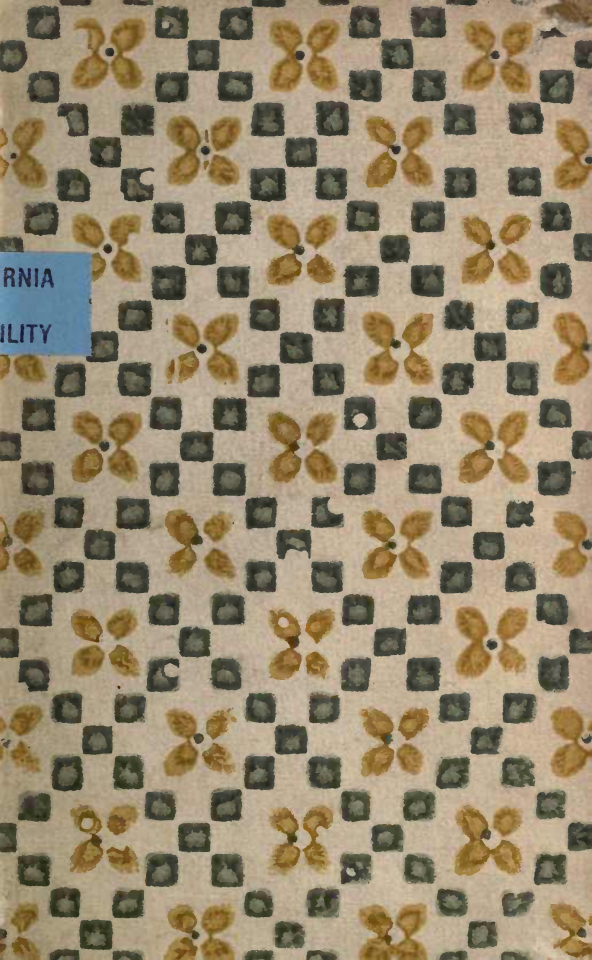
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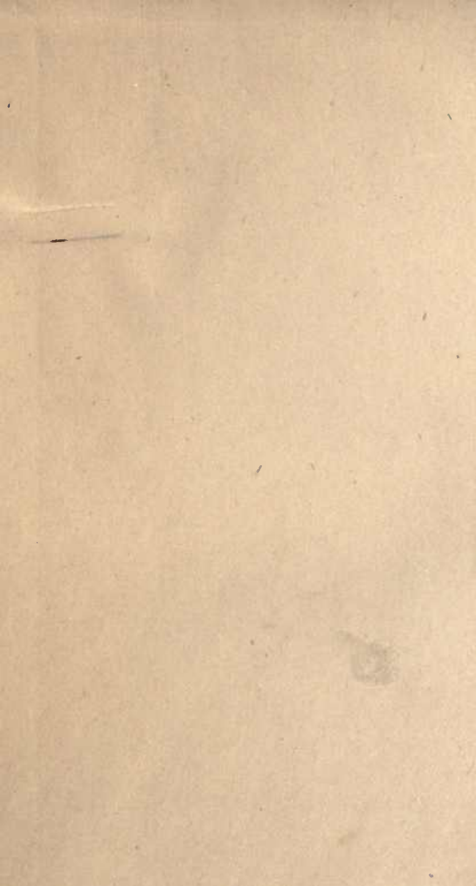

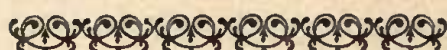

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TO KNOWLEDGE.

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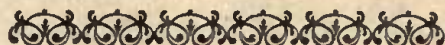

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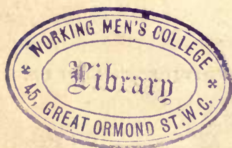
PHILOSOPHICAL THEORIES AND PHILOSOPHICAL EXPERIENCE.

BY A PARIAH.

THIRD EDITION, ENLARGED.

LONDON:
JOHN W. PARKER AND SON, WEST STRAND.
1854.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PREFACE TO THE THIRD EDITION.

SINCE the Pariah first laid his Theories and Experiences before the public, some thirteen years have elapsed, and a Third Edition is now called for. During that period the mutations in the world have been neither few nor small, and it is natural that the writer should scan them with an inquisitive eye, for they are the test of his arguments and opinions: have they or have they not been such as, from these arguments and conclusions, might have been expected?

In former times when "the pilgrimage from London to Canterbury" required a guide; when the journey from Chester to the capital occupied eight days, even for a princely *cortége,* and when roads were so dangerous that few travelled at all, the period above mentioned would have been deemed far too short to confirm or to upset

2015288

a theory, or to effect any great change either in the moral or the political world; but railways and electric telegraphs have had their influence on ideas no less than on commerce and locomotion. The man who can hold intercourse with France or Germany in the course of a few hours, and who can transfer himself from one end of England to the other with less trouble than he formerly took to visit a neighbour, will have more elements of thought at command, and will form a truer estimate of things, and in a far shorter time than would have been possible to the most accomplished mediæval scholar: even a working railway engineer of the nineteenth century has more practical knowledge of men and things, and consequently has more of those decided views which influence political changes, than the most learned mathematician of the thirteenth. It is not wonderful, then, that the Pariah has lived to see that test which all theoretical argument requires, applied to his own, and facts beginning to supersede theories: it is even

probable that ere this meets the eyes of the reader the Legislature will have been engaged in carrying out the views of the unknown and unpatronised writer, who, under as many disguises as were ever adopted by the Caliph Haroun al Raschid himself, has pursued his object with undeviating perseverance. Truth has worked its way,—it is now acknowledged by a large and ever-increasing number that the cottages of England may be inhabited by something better than a race of Helots, and that the Pariahs of Society need not always remain a degraded caste. The cheers which lately hailed the approach of noblemen and gentlemen to the Town Hall of Birmingham to consult on the means of redeeming even the lowest and the most depraved from the grasp of sin and misery, showed how well the intention was appreciated by the warm hearts of the British people; and told in unmistakeable language that in order to unite the nation as one man, nothing more is needful than,—what "the Lord God requires" of all—i.e., to "do justice

and to love mercy" while dealing with our fellows,—"to walk humbly with our God" —when bringing our homage to Him who has given to each the talent which He expects to see fructifying in our hands.

What the result has been of refusing this justice and mercy, and endeavouring to perpetuate helotism by the strong hand of power, I need not now pause to say: it is written in characters of blood throughout Europe: nor can any one tell how soon a fresh handwriting on the wall may record a new MENE, TEKEL, for the despotic rulers of oppressed nations; but, at any rate, ENGLAND seems to have learned a better lesson, and is beginning to seek prosperity where it will always be found, in the brotherly union of all classes. I say "beginning," for much remains to be done; yet if the progress in the right direction be as great in the next twenty years as it has been in the last ten, the coming generation will see the realisation of much which would have seemed like a dream to our fathers; and which, even in our own days, has been

scoffed at by the *soi-disant* "practical men" who would bring down every generous feeling of human nature to the chill calculation of pounds, shillings, and pence. For the comfort of such, however, let it be remembered that the most prosperous of our manufacturers have found in the bond of Christian brotherhood established between master and men, the surest road to wealth; and it may be safely predicted that national prosperity and political strength will follow upon that union of all classes which would result from affording to the labourer and artisan the means of obtaining mental culture: such mental culture as should not only enable him to lighten his toil by mechanical contrivances, but give to his mind that healthy employment and recreation which is needful to strengthen habits of virtuous industry, and which raises the man in the scale of existence from the animal to the intellectual being.

There is, however, a darker side of the picture which must not be overlooked. When the Pariah pleaded for the re-union

of philosophy with Christianity, he pointed out what, to him, appeared the cause of the decay of religious feeling; and was not without a hope that others might see, as he had done, that a dogmatic system which refuses to plead before the tribunal of reason, could not long retain its influence over the people. He showed that it was not so taught at first, and argued that it should not be so taught now; but the warning has not been heeded, and the Pariah has probably been deemed presumptuous for attempting to treat of a subject which was set apart for business of another caste. Nevertheless, so long as a man is conscious of the power to judge, he will not abandon the right to do so; for who will deny that the gifts of the Creator constitute the rights of the creature: since Omniscience does not stultify itself by bestowing faculties which are not intended for use: and in the healthy and vigorous growth of youthful Christianity it never thought of adopting the heathen fashion of maiming itself in honour of the Deity. All that God bestowed was thank-

fully used: the rationality of the Gospel was freely appealed to, and when the heathen was converted to the faith, it was because it was more reasonable, more pure, more simple, and more congenial to his better nature than any of the systems with which he was conversant. Out of the thousands who received that faith during the second century, probably not one owed his conversion to any supernatural proof of its truth; but it was the religion of human nature:—it at once elevated and satisfied man's hopes and wishes: and it was worthy of a Deity infinitely holier and purer than anything that the mythologies of the heathen could produce, and whose perfections even philosophy had but dimly shadowed out. The ennobling power of Christianity was not the least of its recommendations: "For," says Tertullianus, "who that witnesses the constancy under suffering which our people exhibit, will fail to inquire whence they gain this fortitude? and having inquired, his admiration is changed into belief;"—its simplicity was

another: the "yoke was easy," the "burthen light;" but Christian sects have vied with each other in depriving it of these characteristics, and overlaying the doctrine whose distinguishing characteristic it was that it was preached to the poor, with complicated dogmata which the poor do not understand, and are ceasing to believe.

This is no imaginary danger, conjured up by a speculative writer:—it is present,—extensive,—increasing;—and we have only to look into the document lately published by authority to see that if the ministers of the Church of Christ persist in their present system, and continue to separate faith from reason, they will, ere long, find that their occupation is gone; for that the poor have cast away altogether a system which has been rendered too complicated and mysterious for their simple understanding. A heathen accustomed to impure and wearisome observances might be struck with admiration by a holier faith, and embrace it; but he whose childhood has been wearied with catechisms which he did not

comprehend, rendered more unattractive by explanations learned by rote, and perhaps enforced by the cane, will most probably leave his Testament and his faith together on the school-desk, and abandon for ever a religion which is inseparably connected in his mind with wearisome lessons in unintelligible language, and very likely, punishment also. Let us hear the report of the Registrar General, and then judge whether the Pariah raised his warning voice without cause. "While the labouring myriads of our country," says this document, "have been multiplying with our multiplied material prosperity, it cannot, it is feared, be stated that a corresponding increase has occurred in the attendance of this class in our religious edifices. More especially in cities and large towns is it observable how absolutely insignificant a portion of the congregation is composed of artisans. They fill, perhaps, in youth, our National, British, and Sunday Schools, and there receive the elements of a religious education; but no sooner do they mingle in the

active world of labour than, subjected to the constant action of opposing influences, they soon become as utter strangers to religious ordinances as the people of a heathen country. From whatever cause in them, or in the manner of their treatment by religious bodies, it is sadly certain that this vast, intelligent, and growingly-important section of our countrymen *is thoroughly estranged from our religious institutions* IN THEIR PRESENT ASPECT. Probably, indeed, the prevalence of *infidelity* has been exaggerated, if the word be taken in its popular meaning as implying some degree of intellectual effort and decision; but no doubt a great extent of negative, inert indifference prevails, the practical effects of which are much the same. There is a sect, originated recently, adherents to a system called 'Secularism,' the principal tenet being, that as the fact of a future life is (in their view) at all events susceptible of *some* degree of doubt, while the fact and the necessities of a present life are matters of direct sensation, it is therefore

prudent to attend exclusively to the concerns of that existence which is certain and immediate—not wasting energies required for present duties by a preparation for remote and merely possible contingencies. This is the creed which probably with most exactness indicates the faith which virtually, though not professedly, is entertained by the masses of our working population; by the skilled and unskilled labourer alike — by hosts of minor shopkeepers and Sunday traders—and by miserable denizens of courts and crowded alleys. They are *unconscious secularists*, engrossed by the demands, the trials, or the pleasures of the passing hour, and ignorant or careless of the future."

Such is the result of official inquiries made with no view to the strengthening an argument or supporting a theory—inquiries made by laymen and men of business, who have viewed the matter as a fact and recorded the information they have gained for the use of the government and the public; and it may well give room for

uneasy thought. Were it the most ignorant and degraded class alone which had thus virtually abandoned Christianity, we might hope that the evil would be remedied by education in some of the schools which are everywhere springing up; but a large proportion of our artisans are men of shrewd sense, quickened by the necessity of using it in their several avocations; possessed, too, of a tolerable share of information and anxious for more. This state of things, then, has not been produced by mere ignorance, and it is no part of wisdom to endeavour to disguise the truth. The fact is, however unpalatable it may be to many to acknowledge it, that neither the school lesson nor the Sunday sermon is suited to the needs of this "vast, intelligent, and growingly-important section of our countrymen." The lecture-room is crowded with the very men who forsake the Church!—Does not this tell in sufficiently plain language that the Church no longer gives the kind of instruction which they require? The simple and sub-

lime philosophy of the Gospel, founded on the deepest knowledge of human nature, is ready for those who seek it—why is it refused to the very people to whom it was intended? At present the major part of our population is as little Christian as in the days of Greece and Rome, when pure philosophy was taught, and professed by the few, and *οἱ πολλοι*, as now, thought only of the present life, and even of that took a very superficial view; for, be it remembered, that the mythology of the heathen was rather an amusement than a faith, and was maintained rather for the gain it afforded than from any deep conviction of its truth. When the Christians were opposed, it was not because they were teaching untruths, but because their tenets would put a stop to sacrifices, shrine-making, and games in honour of heathen deities. The established religion was profitable, therefore it was professed; but it filled no place in the mind of the people. And is not this, then, the state of things in this country, according to the authorized account of the Registrar

General? There must be a cause for this; and I trace it to the habit of teaching in childhood a creed which has no hold upon the reason, which is couched in scholastic language for the most part, and unintelligible to the children so taught—mysterious dogmata, beyond a child's comprehension, are taught to those who cannot stretch their mind to any abstract idea whatever, and repeated parrot-like by scholars who attach no meaning to the words they utter. What wonder that in after years they shake off the wearisome remembrance! for what is there in it all which can appear to them to be available to the business of life?

Let me not be misunderstood. There is nothing in Christianity as it was originally taught which need shrink from the closest argument—the most popular explanations;—it is practical and philosophical at once, applicable to the commonest business of life, and so founded on the very nature of man that it explains the most complicated phænomena of that nature, and—as the pure truth always must

be—fitted for all classes and all time. But in order to this, it must be freed from the formalities of another age—it must be allowed its expansive force, and be taught as the Apostles taught it: they sent forth a word which conquered the world, and without one attempt to support their cause otherwise than by patient endurance and reasonable remonstrance, succeeded at last in placing a Christian on the throne of the Cæsars. Is the doctrine of Christ other than it was then? Does it not still speak of the easy yoke, the light burthen, the universal brotherhood of man? But even now, as formerly, "God hath chosen the foolish things of the world to confound the wise, and the weak things of the world to confound the things that are mighty." It has not been among learned dignitaries and university functionaries that the movement has begun, to which I have already called the reader's attention: humble and illiterate men have done the work of Apostles, and with no less success. Let the ministers of the Gospel take the example home

to their own hearts in the privacy of their studies, and try whether they cannot—by abandoning the jejune instruction which the people are weary of hearing, and by suiting their preaching to the time, the place, and the auditors, somewhat better than now is the case—recall the wandering flock to the fold of Christ. It is not with such facts staring us in the face that we can afford to be polite; the clergy, with some bright exceptions, *are behind the age*—behind it in information—behind it in activity of mind, and logical precision of reasoning. In order to preach to intelligent and acute men, the preacher must know what they know, and know it better; and why have we such princely establishments connected with our national Church, if it be not for the sake of affording means and leisure for such mental culture as would keep the clergy in advance of their flocks? The question now is, not whether we are to belong to one sect or another; but whether our people are to be Christian or pagan; and a few years more of

obstinate adherence to mediæval forms of thought on the part of our clergy, would give rise to another question yet more unpleasant;—for it will naturally be asked, if the work of Christ be thus done by laymen immersed in the business of the world, who yet find time for this, what is the use of a set of men who teach us nothing of all that we want to know: who in science, history, and a knowledge of antiquity, are unable to give us any of the information we need, and who leave the work of God to be done by other hands, the information to be gained from other sources?

Let not the Pariah in this, as in other things, prove a true prophet.

March, 18, 1854.

ADVERTISEMENT TO THE SECOND EDITION.

WHEN the Pariah first published his lucubrations to the world, he scarcely expected that they would meet with so favourable a reception as to call for a second edition: in this it appears, he had deceived himself; and he now sends his "small book" to the press a second time, with the gratified feeling that he has not laboured altogether in vain. He does not, in the guise of writers on lesser subjects, return thanks to the public for its liberal patronage, for profit and fame were no part of his object; but he rejoices in the thought that he may perhaps have contributed somewhat towards the advance of that kingdom of Christ on earth, which has hitherto been the object of our wishes rather than our expectations.

The success of his small work seems to indicate that many are beginning to feel the want of something which should teach them, not only the Christian faith—for of such there are abundance,—but its rational grounds; something which by shewing how deeply it is rooted in, and entwined with every thing about and within us, may prove that the Framer of the world and its Lawgiver are the same; and thus lead them to the cross of the Redeemer, with the full conviction that the lesson to be learned there is no "cunningly devised fable," but that in truth "the wisdom of God" no less than "the power of God" was there manifested to the world.

This was the object which the writer proposed to himself when he first attempted to put into a portable form the result of many years' thought, and experience gained through suffering. Faith, without rational conviction is but like the seed which fell in dry places; it withers when the hour of trial comes; for it has not rooted itself deeply enough in the mind to draw thence wholesome nourishment; and hence perhaps arises much of that "falling away," as it is

technically termed, which occasionally scandalizes the world among professing Christians. The man, on the contrary, who has cleared and worked the soil beforehand, for the reception of the seed sown by the Divine Husbandman, is at least in a fair way of seeing it bear good fruit.

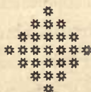
To handle the spade, and root up weeds, is a toil permitted, and indeed appropriated to the lowest caste in society, though to turn up the ground to make it ready for the heavenly seed, be a task which angels might be proud of. Humbly, and yet boldly, therefore, as becomes one of a despised and oppressed caste on a noble mission, he has addressed himself to his work; and, like a wiser and better man,* has bent his knee to the Throne of all grace, and asked for a blessing on his attempt. If any success has attended his endeavours, he feels that it is to the sanctifying effect of such a prayer on his own mind that he owes it: may the reader, like the writer, gain, while turning up the soil, the

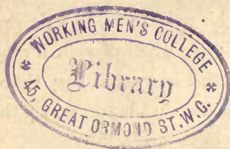
* Joseph Mede.

treasure of a firm faith in Him who is THE TRUTH AND THE LIFE, and who is always found by those who seek Him.

And with this heartfelt good wish, kind reader, the writer takes his leave of thee for the present.

November 10, 1844.

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THERE was a time when none dared profane the name of philosophy by its mention, whose lips had not been touched with hallowed flame by Alma Mater, and who had not dozens of honorary letters following his name, like the tail of a Highland chieftain in olden days: but that time is past: men have at last discovered that the conferring a degree does not always confer sense, and that among the undignified names which go with neither a footman behind, nor a coachman before them, there may be found some who have a nobility of their own; and who, amid disadvantages and difficulties, have contrived to assert their right to the peerage of Intellect.

The Writer of this Work, as the title-page shows, is below even this; he is a Pariah, of a despised caste; unthought of even when the ten pounds householders of Stroud or Tamworth have the honor of hearing speeches from, and asking questions of, the great men who in this

country are seized with a periodical fit of humility about once in four or five years. He has no pretensions to academical honors, lectures to no institution, is no hereditary legislator, no limb of representative wisdom: but he has known poverty, sickness, and sorrow; he has bent over the graves of those he loved, and turned again to life to struggle for his own existence, and in this rude school he has learned a lesson which, perhaps, may be not unuseful to his fellow-creatures; he has learned that happiness may be attained under circumstances which seem to forbid it; wrongs borne patiently without losing dignity; privations endured with a gay heart. The philosophy which has done this has made its last and best step,—it has become *practical.* It is no longer the barren speculation of the metaphysician or the idle logic of the schools, but healthy intellectual science, grounded on the great facts of human nature, and available in all the circumstances of our varied existence.

There was a time too,—how much of late has sunk in the troubled ocean of human affairs even in the space of one not very long life!—there was a time when intellectual science under the name of metaphysics, was the mark for

every witling to try his young jests on, sure of a favorable reception from the great body of his hearers. It is one of the singular facts of our social state, that there are always some few things which no one who pretends to enter good society ought to know; and if all these *pet* ignorances had had their tombstones erected, and epitaphs duly written by their admirers, it would be hard to conceive a more amusing, though in truth melancholy record of human folly. In the days of Addison, no well-bred lady would venture to know how to spell; in later times the prohibition only extended to any cultivation of the intellectual powers, which for a long time was most religiously attended to by all the fair votaries of fashion. In the days of Fielding, it would seem that a very pretty gentleman indeed, might gain a grace by misquoting Latin sufficiently to show that he despised the dull routine of school education. Later yet, a mineralogist or a botanist walked a few inches higher, if he could avow himself ignorant of metaphysics, and make some clever jest on the cobweb speculations of its admirers; and all, learned or ignorant, wise or foolish, still unite in thinking it the properest thing in the world to be totally ignorant of the properties of

drugs, or their effect on the human body. True it is that a healthy mind in a healthy body is a thing worth having; few deny that: and intellectual and medical science may do somewhat towards the preservation of both; this also is allowed: but to attempt to *know* anything about the matter is really too fatiguing for polished people, who can afford to pay tutors and physicians. But the writer is a Pariah, and having said thus much, he need hardly assure his readers, if any of that so-named "gentle" race ever take up these pages, that he never was great, or fashionable, or scientific enough, to have a pet of this kind: it would have been a troublesome, sometimes an expensive, always a disagreeable companion, a great hinderance to all rational employment, and no help to one who not unfrequently has found his wits his best heritage.

If such an one cannot afford to keep a pet ignorance, so neither can he afford to carry on abstract speculations which lead to no practical result: corporeal wants must be attended to: the difficulties of this life must be met and vanquished; and if in the midst of the struggles requisite to avoid being trodden under foot in the crowd, those great questions which sooner

or later occur to every reasonable mind, present themselves, it is not as curious contemplations, matters of philosophical research merely, which may occupy a portion of the time which is gliding away in the lap of ease and luxury, but as problems whose solution involves every thing worth caring for in time or in eternity; problems whose due solution may gild a life which has no other gilding, may set fortune at defiance, direct our steps in difficulties, and like oil upon the waves, spread calm where all was turmoil and danger before: it is then that intellectual science loses its character of barren speculation; every step in advance raises us farther above the mists of earth; and the heart warms, and the limbs grow strong, at seeing the prospect brightening in the distance, under the unclouded beams of truth and love.

It seems, nevertheless, to be necessary that science, as well as man, should pass through its different stages of growth; at first, theoretic and fanciful, then abstruse, and finally, vigorous and practical. Astronomy has so proceeded; many a small wit jested at the idle "star-gazing" of Flamsted and Halley as satisfactorily as the same genus has scoffed from age to age at the "unintelligible" reveries of So-

crates, or any other seeker of the truth, from Pythagoras down to Dugald Stewart and Theodore Jouffroy; but no small wit *now* tries to ground his fame on a successful scoff at "stargazers;" even Butler's "Elephant in the Moon" has followed the fate of the jests of lesser men, it is neither quoted, nor perhaps by the generality of the world remembered; and the science which guides the mariner over an untracked ocean with all the assurance of a mapped country, sits enthroned in the affections no less than the respect of the present generation. It is time that metaphysical, or, as I would rather term it, intellectual science,* should take a like

* "Taken in its largest comprehension, as the knowledge of abstract and separate substances, Aristotle raises the philosophy of mind *above* all other parts of learning. He assigns to it the investigation of the principles and causes of things in general, and ranks it not only as superior, but also as prior in the order of Nature, to the whole of Arts and Sciences. But 'what is first to Nature is not first to Man.' Nature begins with causes, which produce effects. Man begins with effects, and by them ascends to causes. Thus all human study and investigation proceed of necessity in the reverse of the natural order of things; from sensible to intelligible, from body, the effect, to mind, which is both the first and final cause. Now physic being the name given by the Peripatetic to the philosophy of body, from this necessary course of human studies, some of his interpreters

place, for it has in its power to do a greater work than this: it can map the gulph between earth and heaven, and teach man, amid the conflicting opinions of the pilots who undertake to steer his bark, to choose and follow the straight course which will lead him over that untracked ocean in safety. The great men whose lives were spent in the pursuit of abstract truth, have left the results of their labours to us, and as the fanciful dreams of proportion in numbers, pushed at last to the exactness of mathematical science, have given us practical astronomy, so it is for us now to avail ourselves of the severe truth to which they have reduced the more ima-

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called that of mind, Metaphysic, *των μετα τα φυσικα*, implying also by the term, that its subject being more sublime and difficult than any other, as relating to universals, the study of it would come most properly and successfully after that of physics. Taking it, however, in its natural order, as furnishing the general principles of all other parts of learning which descend from thence to the cultivation of particular subjects, Aristotle himself called this the First Philosophy; but as its subject is universal being, particularly mind, which is the highest and most universal, he gave it also the appellation of the Universal Science, common to all the rest; and lastly, to finish his encomium of this First and Universal philosophy, he honoured it with the exclusive name of 'Wisdom.'"—*Tatham's Chart and Scale of Truth*, Vol. I. p. 17.

ginative Greek philosophy, and draw from it practical metaphysic.

Had any one else appeared inclined to undertake the task, the Writer would willingly have left it in the hands of the learned and the illustrious in science; but no such attempt seems likely to be made, and as there are but too many of the Pariah race, who, like himself, may find that something more than the trite instruction of the school-room, or even the pulpit, is wanting to brace the mind to resist the rude buffets of the world, he at length steps forward, not as thinking himself wise, but as feeling himself experienced:—

> ——— "Nec nos via fallit euntes:
> Vidimus obscuris primam sub vallibus urbem
> Venatu assiduo, et totum cognovimus amnem."

INTRODUCTORY INQUIRIES.

THERE are some few important questions which have been constantly agitated from the earliest period that we have any record of man's history. The answers attempted have been various; but none, as yet, have been so generally satisfactory as to prevent them from being agitated afresh by every new generation, for to every new generation they present themselves with a never-fading interest.

Man goes forth at his entrance into life, confident in powers which, to his youthful fancy, seem to know no limit; he feels the happiness that his nature is capable of, and that it sighs for, and he rushes on to grasp and to enjoy it; but he soon perceives that a power, exterior to himself, limits, and often thwarts his endeavours; he finds himself at the mercy of circumstances which he can rarely guide, or at best only in a very slight degree; and amid the anguish of disappointed hope he asks himself,

"What is this power which I can neither control nor escape from?"

But he is young; he has probably expected to find his happiness in the pleasures of the senses; and a voice within him says that these are gross, and unworthy of the god-like nature which he is conscious of possessing. He launches into the pursuits of the man; forces himself to acquire science and greatness at the expense of exertions which exhaust his physical strength; and then, when almost sinking under the fatigue of labors which, nevertheless, have not given him all that he sought, he asks himself again, "What is this restless power within, which despises corporeal enjoyment, and triumphs in compelling the sacrifice of bodily comfort for an object which, after all, none attain?"

Insurmountable obstacles limit his progress; the perverseness of men thwarts his views for their benefit no less than his own; he looks round him in querulous displeasure, and again exclaims, "Why is evil in the world?" But old age now approaches, "his thoughts" must "perish" ere he has accomplished half that he has proposed to himself; he must "go hence and be no more seen," before he has even attained the fruit of his labors; he seems to have

"walked in a vain shadow, and disquieted himself in vain;" and then, when all that has filled his great aspirations seems shrinking from his grasp, when all appears "vanity and vexation of spirit," he once more asks in a sort of concentrated despair, "Why does man propose ends to himself which he can never compass? What is the good which his nature demands, and how is it to be attained? Is it sensual enjoyment? No! such pleasures pall on the senses, and end in disgust. Is it intellectual? The limited powers of men make the pursuit of science laborious, and death comes ere he has reached what he sought. Is it in the innocent enjoyments of social life? These are soon buried in the graves of those he loves."

These are the questions which every man not wholly brutalized must sooner or later ask himself. These are the questions in fact, which have agitated mankind in all ages, and whose solution forms the basis of all systems of religion and philosophy. They all may be resolved into three; namely,

1. What is the nature of the power exterior to ourselves?

2. What is the nature of the power within ourselves?

3. What, with reference to these two, is the nature of the good which man ought to propose to himself as his aim and object?

The solution of the first two questions forms the subject of all metaphysical, or in other words, intellectual science. That of the third gives the practical result. Systems of religion decide these questions authoritatively, systems of philosophy solve them by rational argument, and as, however numerous these systems may be, there can be but ONE TRUTH, so we are justified in assuming that the religious and the philosophical system must tally, or that one or the other is in error. There is, however, this difference between the two, viz., that the authoritative system is necessarily delivered in the form of dogmata to be received, not of arguments to be tried and weighed; and these dogmata are couched in words which, as no previous course of reasoning is recorded, are liable to be misinterpreted by the prejudices of mankind. The philosophical system, on the contrary, is obliged to prove its assertions step by step; and if an undue leaning to any preconceived notion should lead to the adoption of a weak argument, the first dispassionate man who goes over the same ground will perceive and

overthrow it: thus, though in the case of sufficiency of external evidence to prove the pretensions of the first to be well grounded, it is the shorter process, and therefore most acceptable to man's indolence; yet the second is the more certain one. To be completely satisfactory, the two should be joined together; but though occasionally a voice has been raised to call for this auspicious union, unfortunately for the world, the guardians of the former have generally held her to be too rich a bride to be bestowed on a mate who had no better inheritance than Socrates' old cloak and worn sandals, and have "forbidden the banns." The consequences have been disastrous: philosophy, like a wild youth, has run through a course of licentiousness; and religion, like a wealthy heiress, has become the prey of designing men. It is, perhaps, not too late to rescue both. Let us then begin with philosophy, whose morals,—whatever they might have been while he was Socrates' pupil—have in later times been thought by no means faultless.

It would be a long, and to a reader—a wearisome task, to go over all the disputes which have agitated the learned through so many centuries, as to moral perceptions, innate ideas, &c. He

who would map a country must explore the by-roads; but he who uses the map, if he finds the road laid down lead to the place he wishes to arrive at, will not think it needful to traverse every lane on his way. It will suffice, therefore, to assume as an axiom,—what nobody probably will deny,—that truth is reality, namely, what really *is;* error, an unfounded persuasion of something that is not. Now what is, must be either within or exterior to ourselves; and to know what is exterior to ourselves truly, that is, in its reality, we must examine it by the evidence of our senses, or by that of our reasoning faculties, or by both conjointly. There is no other process by which we can arrive at a certainty of knowledge. Thus then, as an innate idea is one which must be received in the mind as truth without previous evidence, an innate idea of what is exterior to ourselves is a contradiction, and the common voice of mankind has decided on the point, by characterizing those who receive the persuasions of the imagination in the room of evidence as insane. Nor is the impressing itself on the mind without previous evidence the only necessary character of an innate idea; it must also be found in the minds of all mankind as a con-

stituent part of their nature, otherwise it cannot be innate. It will soon be seen that there is only one idea which can answer to this description, namely, that of individuality, whose demonstration rests on that very individual consciousness, an evidence so unhesitatingly allowed by all mankind, that were any one to attempt to overthrow it by arguing that assertion is no proof, he might make good his position, and yet convince no one: for all feel that in order to assert individual existence it is requisite that a man should exist. But all impressions received by this individual consciousness are exterior to it, and consequently require to be examined; and thus intellectual science, like all others, becomes the subject of experiment and inquiry, and can only make progress by being classified and arranged so as to enable different individuals and succeeding generations to pursue and record their observations upon different portions of it. Even that part which Bacon himself hesitated to subject to the rules of his experimental philosophy, namely, religious knowledge, must submit to the same sort of examination: for from whatever quarter the authoritative dogma comes, it is presented to the senses from without, and cannot be received

as authority, without sufficient evidence, both external and internal, to satisfy the mind of its truth; and as in classifying, the most natural arrangement is always the most intelligible, so the great questions which man's experience in life never fails to suggest to him, afford at once the simplest and the best division of the subject.

I. What is the nature of the power exterior to ourselves?

Man's first step, when this inquiry has suggested itself to his mind, is to look round on the objects amid which he moves, and which often appear to be the active agents in causing him either enjoyment or suffering. Does the power which controls him exist there? The untaught savage perhaps answers, yes, and selects his fetiche from the first thing that strikes his fancy. A little more cultivation sends him from the fetiche to something less tangible, and of greater apparent energy, and the heavenly bodies are adored: but when the question occurs in an age of more advancement, a very different process must be resorted to, in order to satisfy a mind accustomed to the severity of demonstration required by real science. We perceive an universe whose slightest movement we are unable to regulate; after ages of thought and

observation, we think it our glory that we have arrived at the discovery of the laws by which it coheres; but they are so totally beyond our power to alter, that we can only hope to effect our purpose by shaping it in conformity to them. We have subjected these laws to the strictest examination; we cannot doubt that we have arrived at the truth, but these immutable laws provide only for the regular movement of inert matter. We look round again; we are surrounded by organized bodies, and we have not yet discovered the law by which they exist. We converse with our fellows, and find something beyond organized life merely; we find intellect, that subtle agent by which our inquiries are carried on, itself offering a problem of no small difficulty. The conclusion from all this,—ascending by a legitimate process of induction from what we see and hear to what we cannot discern by any of our external senses, and can only apprehend by means of our reasoning faculties,—is, that some power must exist capable of giving birth to all this; and as "ex nihilo nihil fit," had there ever been a time when there was nothing, there never could have been a beginning of existence, therefore that power must be eternal; and as there is nothing

but inorganized matter that bears a character of permanency, and the notion of an eternal series is an absurdity; so to produce organized and intelligent beings, that eternal power must be intelligent. How much superior the creating intelligence must be to that created, the man who has constructed a steam-engine may guess; for he knows at what an inconceivable distance in the scale of being he stands from the machine he has put together.

The power exterior to ourselves, then, is eternal and intelligent, and what is eternal, is of necessity self-existent. Now it is a necessary consequence of self-existence that such a being must be unlimited both in power and knowledge; for as he himself exists by his own will, therefore his own nature, no less than all other natures existing by his will, must be perfectly known to him, and entirely under his control, and what is unlimited must be One; for to suppose a second eternal principle would be to suppose a second individual will and purpose, which must produce a constant warfare, and would derange all the operations of nature, whose laws, on the contrary, we find to be immutable. For an incorporeal being can have no individuality but in will and purpose, and

if the will be one, then there is an amalgamation of nature. Thus by a legitimate course of reasoning, we arrive at the certainty of one eternal, self-existent, all-wise, and all-powerful Being, whom our simple ancestors, with a degree of philosophical accuracy which no other nation seems to have reached, named ᵹoꝺ, i.e. good, for to such a being alone could the perfection belong which justly deserves that appellation.

But we have not even yet exhausted the consequences of this chain of reasoning: for the all-wise and all-powerful Being must be able to effect his will, whatever it may be. We may again look round us, and judge from what we see, what that will is. We see a profusion of means to convey pleasure; a profusion of creatures seemingly made to enjoy it, especially among the lower grades of organized beings. We have already proved that the eternal Intelligence can effect his will, whatever it be; then if that will were malevolent, we should see and feel nothing but destruction and misery; but we do not see it; then that will is not malevolent.

But the sad questioner who began the inquiry as to the nature of this eternal power, may perhaps again inquire, "If the will of the Creator be benevolent, why am I controlled in

my wishes, limited to a life which is too short for my projects, and often made miserable during that short life by sickness or by the loss of what I had centred my whole joy in?" But who has assured you that these few years elapsing between the cradle and the tomb are all? The will of the eternal Being is not malevolent, beings of a far lower grade fulfil the end of their being and are happy; you aspire to something which the short span of life never gives. Is it not a proof that your nature is not bounded by that span? Turn then to the next question, for it is now time to do so.

II. What is the nature of the power within ourselves?

Our only way of investigating an intangible and invisible power is by its effects; we can, therefore, only judge of what the power within ourselves is, by noting the phænomena of human nature; these, on a little consideration, will be found to resolve themselves into three classes.

1. The instinctive emotions and appetites, all arising involuntarily, attended with a sensible bodily effect, and causing derangement of bodily health when in excess; anger, fear, &c. all take their place among these.

2. The faculties; which are exercised by choice, but suffer fatigue in the exercise, require rest, and exhibit other symptoms of their animal origin, but nevertheless slumber, if not called into activity by a voluntary act.

3. The acts of a restless undivided will, which requires no repose, suffers no fatigue; is as strong in the child or the dotard, as in the mature man; which claims for itself the whole individuality of existence, and speaks of *my* body, *my* faculties, but never seems to have the most distant conception that this body or these faculties are identical with itself.

It is quite clear that neither of the two first classes of phænomena can be referred to that power within whose nature we are seeking to ascertain, for this often curbs and contradicts the instinctive emotions, and impels the faculties to continued exertion, when weariness, and pain even, show how much they need repose Animal nature does not seek to destroy itself knowingly, but man knows that his life is the forfeit of a particular course of action, and yet he pursues it: then the impelling power is of a different nature from the powers which it impels. It is this impelling individual will, then, or

"personal power," (as it has been aptly termed by a philosopher* whose works deserve to be more known than they are,) that must form the subject of our inquiry; for on its real nature depends the answer to the last question as to what the good is which man has to seek, and what are the means to obtain that good.

The first indication of this power is seen in the infant angry at its own helplessness, and evincing its discontent by passionate struggles and cries. The individual will has come into a scene which it does not understand, has organs which are insufficient for its desires, and in mere wayward spite, beats the nurse for not comprehending what is the matter. Watch the growing child; questions, curious observations, obstinate persistence in its own views, show a power which is rather seeking information for its own guidance, than by any means partaking in the immaturity of the childish bodily form. Stronger beings have a will also, which they enforce by the infliction of punishment; the child resists till pain teaches him to choose the lesser evil, and the point is yielded just when

* Théodore Jouffroy. "Mélanges Philosophiques—Des facultés de l'âme humaine."

pain or privation has reached the point of being more irksome than the concession demanded:* this concession very generally being not the sacrifice of any instinctive desire, but some endeavour at independence in a thing which is itself

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* It may be objected by some, that the higher animals exhibit some traces of this independent will; but before this objection be allowed weight, it ought to be considered that there is an animal will, the result of mere organization; the impulse of sensation mechanically propagated through the nerves and brain, until the nerves of voluntary motion in their turn receive and propagate the excitement to the muscles; which is, in fact, the whole mystery of instinct. It will be difficult to show that in animals anything more than this instinctive will is ever discovered, but even supposing there were, let the argument have its weight: it might go to prove, perhaps, that the occasional sufferings of the animal creation are parts of a system not yet fully developed, but it alters not the case as regards man, for we cannot argue from unknown premises; and before we can draw any deduction from animal nature to apply to our own, we must know much more about it than we do. The pride of man has disclaimed the fellowship of the animal creation, but we should be puzzled to find any sufficient proof one way or the other; let us then be contented to leave this matter where we found it, and argue only from what we know, satisfied that man will suffer no deterioration, even if

"in that distant sky
His faithful dog should bear him company."

of little consequence. The child arrives at maturity, and a fresh struggle for freedom commences. Life is thrown away as mere dust, to cast off slavery or preserve free institutions; for man has discovered practically that his nature only arrives at its highest point in a state of rational independence. Old age and sickness supervene; does this restless power, then, yield to circumstances? No. Impatience at the failure of the organs which have been wont to do its bidding, is the usual concomitant of these, and if we do not find impatience, it is only because it is curbed by the knowledge which the imperious spirit has at last gained, that this worn and enfeebled body is not its home, and that brighter days are approaching. When Maskelyne, amid the wreck caused by old age and palsy, blessed the child that sought him with affection, and could only utter "great man once,"—was the personal power less strong? Those few words showed what he would again have done, had he but had the organs requisite for the work. In sleep even, this voluntary power slumbers not; it resigns the reins, indeed, for a time, on the repeated petition of eyes, limbs, and brain, all declaring that they can do no more; but it remains on the watch to

use whip and spur again the moment it finds its servants capable of action. If any one doubt this, let him only strongly resolve at going to sleep, to wake at a particular hour, or a particular sound; and without any other known cause than the will, behold the man wakes, though, in any other case, he would have slept to a much later hour, or continued asleep through much louder sounds. This is a thing of too common occurrence to require particular instances to be given. Finally, in death itself, the last symptom of life that we see, is usually an ineffectual effort to do or say something which the dying person evidently thinks of importance, disappointment at being unable to do it is visible, and the man dies.

We have traced the body from helplessness to death: it varies in its powers; first some instincts prevail, then others: then the faculties are developed, and then they fail. We can easily conceive that this waxing and waning power may return to its elements and be recompounded in a fresh form; but the unchanged individuality which neither grows nor decays, how is this to perish? What seeds of mortality can we find in that? The anatomist traces nerves of sensation, influencing in their turn the nerves of

voluntary action, and shows a beautiful arrangement thus made for the preservation of the animal, but the individual power steps in, says to sensation, "You may stimulate the nerves of voluntary action, but I forbid it;" and to the nerves of voluntary action, "You shall not wait for the stimulus of sensation; I command, and you shall do my bidding." In what part of bodily organization then is this power seated? The philosophical seeker of the truth must answer, It is not a part of bodily organization; it shares not in the growth or decay of the body; then by analogy, neither does it share in its death;* it sighs for other joys, despises what the body offers, spurns at the limited span of life. What is this but an indication of its destiny? Happiness consists in the full development of all the powers of Nature: no animal seeks that

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* In proportion as science advances, the great truths of Christianity stand forth in a clearer light. In former times the life and the soul were considered as identical, and many a puzzling question arose out of this mistake. *Now*, physiology has shown that the vital power, inscrutable as its nature has hitherto been found, is nevertheless the same in the animal and the vegetable; consequently that life is not dependent on the soul, but is a perfectly distinct force, acting by its own peculiar laws. But though the soul and the life be different, still the

which it is unable to enjoy—the fish remains quiet in the water without seeking to quit it to share the pleasures of the quadruped or the fowl. Man sighs for the felicity of the Deity; then man is of a kindred nature. We proceed therefore to the final question.

III. What, with reference to the two powers already treated of, is the nature of the good which man ought to propose to himself as his aim and object?

Our inquiry here will not be long. Whatever other orders of intelligent beings there may be, there are only two that we can form any judgment of:—The One, the subject of our first, the other that of our second question. We assume it as an axiom in philosophy that the felicity of the being must consist in the full development of its natural powers, and we

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former is an acting force which the physiologist is obliged to acknowledge; for it not unfrequently contends with the vital force, and occasions much disturbance in the system. One of the most distinguished scientific writers of the present age, when treating of organism, distinctly reckons this disturbing force among the different independent causes of the phænomena of man's being. Thus it is that science and religion, the two great inscriptions on God's fabric of creation; always tell the same tale, though it be written in different characters.

see this to be the case with all the inferior grades of animals: we turn to man, and we see that the development of his *animal* powers does not satisfy him, he asks for more; he asks for knowledge, greatness, immortality, and these are the felicities of the Deity; then, the good which he has to seek can be none other than the development of an intelligent, and not an animal nature. We have already seen that the individuality is concentered in that interior power whose nature we have been examining; that interior power is akin to the Deity; then, the felicity of the Deity in kind, though not in degree, may be his, and no rational man will propose to himself any other.

Such are the conclusions of philosophy, such were its conclusions from the time when these questions were first agitated, and wise and good men, long before our æra, had suffered exile, imprisonment and death, rather than abstain from promulgating these great truths. Who now will dare to stand forward and say that there is any "just cause or impediment" why philosophy and Christianity should not plight their troth to each other, and bless the world henceforward by their holy union? Once more "I publish the banns," and defy man to put

asunder those whom God has willed should be joined together. "Fecisti nos tibi et manet cor irrequietum donec restat in te,"* was the sentiment of Augustine. "Ex vita ita discedo tanquam ex hospitio non tanquam ex domo," says Cicero in the character of Cato. "O præclarum diem cum ad illum divinum animorum concilium, cœtumque proficiscar; cumque ex hac turbâ et colluvione discedam!"† Where is the difference between the philosopher and the Christian?

I have now gone over the general outline of the classification which I propose to make of intellectual science. I have, I think, proved in answer to the first question that there exists an eternal, self-existent, creating Intelligence; all-wise, all powerful, and benevolent; and the portion of intellectual science which treats of this Being I propose to call *Theology*.‡

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* "Thou hast made us for thyself, and the heart is unquiet till it rests in Thee."

† "I depart from life as from an inn, not as from home. O what a delightful day will it be when I shall join that company of divine souls—when I shall quit this throng and this mire!"

‡ The term *Theology* has been so long applied to a peculiar department of literature that the meaning of

I have, I think, proved in answer to the second question, that the individuality of man consists in a restless, undying intelligence, akin in its nature to that of the Deity; and I propose to call the portion of intellectual science which relates to the functions of this intelligent, individual power, *Psychology*.

I have drawn as a conclusion in answer to the third question, That such being the nature of that individual power, the good it has to seek is, assimilation to the Deity in will and kind of felicity. The titles given to this part of the science have been various. Some have called it *Morality*, some *Religion;* but as unfortunately

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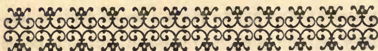
the word is in great measure forgotten. I reclaim for it the original sense; for as *Conchology* means the science which tells of the nature of shells, or *Geology* that which tells of the nature of the earth, so *Theology* in strictness means the science which tells of the nature of God; and it is misapplied when used to classify works which mix up the moral duties and the prospects of man, with the abstract science of the Divine Essence. The word would be novel, but it would aid us to define the limits and objects of the science much better, if we were to include all that relates to the mission of Christ to man, and the obligations therefrom resulting, under the general term *Christology*.

these two terms have been set up as rivals to each other, neither conveys the exact meaning to men's minds which I would wish. It would be easy to coin another Greek compound, and *Agathology* would not ill express that part of the science which relates to the nature of this "summum bonum" and the means of attaining it; but for a plain man a plain word is better, and I would rather head the last division as the practical result of the two former. In what I have to say further, I shall consider these divisions as applicable no less to the authoritative, than the philosophic system. The external evidence of the former I take for granted; Christianity must have had an origin, and it is far less outrage to common sense to suppose its outset was such as its first promulgators assert, than to allegorize Christ and his apostles into the sun and the signs of the zodiac, or any thing else as strange and as improbable. The existence of Christianity is too notorious to be denied; and if, as a system, it offers all that man's best reason has been able to discover, if it offer as a perfect whole, comprehensible to the meanest capacity, what no single man, however great, quite accomplished, then it is no imposture, it is THE TRUTH; that truth which

Socrates died for, and which armed Cicero's timid nature to meet his assassins with the courage of a hero. It is in vain that we attempt to reject it; the man who professes to cast aside Revelation altogether, still, if he be not a vicious man, lives as a Christian, has a Christian's benevolence; a Christian's hopes; it is in his nature; his instincts oblige him to love his fellows; his faculties compel him to acknowledge a First Cause, his dearest wish is immortality: Christianity comes but to second the dictates of his better self, and to give a sanction to his hopes; but with this advantage, that he whose mind has not been enough cultivated to reason out a foundation for these hopes, or to argue man's duties from his nature, finds plain precepts for his guidance which embody all and somewhat more than philosophy could have taught him:—if this system be not divine, at any rate had the Deity given a revelation to man, he could have given no other.

It will be my endeavour now to show how the one truth which forms the centre of both the authoritative and philosophical systems will be reflected back from each in turn, so as to throw light upon the other; and if, in so doing, I may set at rest some few of the angry feelings

which are too apt to prevail on subjects where they are the most misplaced, if but one heart should learn to feel with me that where all are eagerly looking for the truth, that circumstance ought to make us rather friends than enemies, and that the path we take matters far less than the place we are going to;—I shall have at least one cheering thought to go with me to my grave, brightening my path as all else grows darker.



THEOLOGY.

ONE of the most fruitful sources of angry discussions on this subject on the one hand, and idle scoffs on the other, has been the disposition so prevalent among men, to a species of Anthropomorphism in their notions of the Deity: for though all will not go the length of the Egyptian monks who nearly murdered their bishop for endeavouring to persuade them that God had not actual hands and feet,—as they alleged they found written in the Scripture,—yet many would go nearly that length with him who should dare to assert that God has no more of the vindictive passions than of the bodily form of a man. Yet we must see clearly that one is nearly as absurd a fancy as the other, if we consider that a pure spiritual existence has no individuality but in will, and purpose, and feeling; and that therefore any of those changes in mood which are in truth a part of the *animal* nature of man would be equivalent

to a change of individuality in the Deity; for a change of purpose is a change of person, where there is no animal nature to create or suffer that change. Philosophy asserts this, so does Christianity; in God "is no variableness, neither shadow of turning," yet men in all ages have misapprehended a few eastern hyperboles in the language of the Scripture, till they have made a Deity for themselves such as we should not select, even for a human friend. "I defy you to say so hard a thing of the devil," said John Wesley when speaking of Whitfield's doctrine of Reprobation; yet Wesley was not free from the prevailing anthropomorphism himself.

The very first step then, if we would wish either to understand what is predicated of the Deity in our Scriptures, or to know how we ourselves stand with regard to this exterior power, whose will evidently must control us something in the same way that the parent controls the child, is, to ascertain what are the necessary conditions of eternity and self-existence, for it is in vain to say that the Deity is utterly beyond the reach of our reasoning faculties. We can conceive eternity, we can conceive self-existence; every strong and cultivated mind that has turned its attention to these subjects knows this;

though it is one of those parts of individual consciousness which admits no other proof than the feeling that we can. We can conceive,—that is, though unable to comprehend, (using the word in its sense of the entire grasping of a subject,) we can apprehend, or reach to and lay hold on, the great features of the case:—we can arrive in thought at an approximation to the nature of an immaterial existence, though we cannot fathom all its depths; and that we can do so is perhaps one of the strongest, though least conspicuous proofs that we have a sort of imperfect specimen within us of what immaterial existence is; for experience shows that man is unable to conceive what he has no exemplar of. The wildest imagination, while endeavouring to form a monster, has never done more than take disjointed parts of known things, and put them together. The essence of eternity and of self-existence is, that it is boundless, for, as I have already observed, if we suppose any other like power, we must either suppose a difference, or an agreement of individual will and purpose: if a difference, then there must be discord and destruction: if agreement, then, as there are no bodily parts to prevent entire union, there is an amalgamation, and the power is one; one, in its

individuality, that is,—but,—as some ancient Christian philosophers have well observed,—not necessarily one in its parts or functions, since the individuality, the wisdom,* and the actively exerted will, are distinct principles appertaining to the same essence: for it is clear that the individuality might exist for ever without any active exertion, yet the power of exertion is in it, and capable of being manifested at any time; and though the individuality, the wisdom and the exerted will, are distinct parts or functions of the one self-existent Being, they are necessary consequences of each other, and being each perfect, can be susceptible of no change; for the knowledge which directs the will being entire, the choice consequent upon it must be always the same, nor can there be any other essential part or function affirmed of the eternal self-existent Being than these three; all the rest must be mere negatives consequent on them. Thus God cannot be mistaken in the means to an end, or find his purpose changed by unexpected cir-

* The mere English reader is not aware, and even some scholars scarcely consider that the term λογος, which in the Gospel of St. John is translated "Word," has the meaning in the Greek of the "Reasoning Power," or "Wisdom in active operation."

cumstances; because perfect knowledge forbids both. Nor can God suffer pain or grief, because either the one or the other results from the action of some force, exterior and superior to the being so suffering: a thing which perfect power equally forbids.

Again, there can be no distinction of past or future with the Deity. Man measures time by the revolutions of the earth, and by his own waxing and waning powers. Give him an eternal day and an unaltered body, what then will be his past and future? The past is what he has done and knows, the future what he has not yet done, and therefore does not know: but the Deity knows all, where then is his distinction of time? To him it is one unbounded present, and all the events of the world, no less than its component parts, lie spread before him as in a map; save that our map only represents material objects, whereas it is the mind of man which the Deity looks through,—sees the motives which operate there, and bends the events of nature so far to control the actions resulting from them, so as to make even evil intentions conducive to some good end. It is an earthly and a human notion which figures to itself the Deity arranging the affairs of the world by

patching here, and mending there, as if any event could take the Creator by surprise. And here arises the question which has been repeated through all ages, "Why then is there evil? Why is there suffering in the world?" for if an all-powerful Deity sees and permits, it is equivalent to the causing it. Even in human law, the man who stands by and sees a murder committed, without endeavouring to prevent it, is held a party to the crime.

The answer to this is to be found in the nature of the beings in question. There is one thing which even to the Deity is impossible. The self-existent cannot make another self-existent, and what is not self-existent is bounded; for there is an antecedent and a greater power: and what is bounded is imperfect; for there is something which it does not know, and therefore it can commit errors. Now experience shows us that there is no happiness but in voluntary action: minerals have chemical affinities and combine necessarily, but there is no sensation of pleasure; the heart performs its functions involuntarily, and there is no sensation of pleasure in their performance; the goods of life as they are called, such as health, riches, &c., when in quiet possession, give no

pleasure further than they afford the means of seeking it, which is voluntary action. To make a being capable of a high degree of happiness then, he must have a free and intelligent will; and thus he is akin to the Deity, and capable of tasting the same felicity. This necessarily imperfect being, therefore, has a complete freedom of choice, consequently the power of erring in his choice; what then would be the course pursued by unbounded benevolence to preserve him from error? Would it not hedge him round with difficulties at every step towards that wrong path; with inward discomfort, pain, and a long train of evil consequences to prevent him from pursuing it? Would it not school him, as a parent does his child, by allowing him to suffer from his thoughtlessness to make him wiser in future? An imperfect being might not know how to prize or to enjoy the Divine felicity, till taught its worth by having tried in other directions and found himself wrong. Is there then actual evil in the world if we except that of the perverse will of man? I think a short consideration will show that there is not. I think that there is no man who has attained middle age, who will not acknowledge that in the irremediable events of his life

there has always been either a grief avoided, or a good to be gained, if he chose to lay hold on it. A friend, the beloved above all others, dies perhaps; is it long before we can see cause to thank heaven that he is safe from the evil which he would otherwise have had to endure from evil men? His death has changed all our views and aims;—do we not find that in this change of views and aims we have gained more than an equivalent for what we have, after all, lost but for a time? We have gained probably a further power of doing good; have formed fresh connexions over whom we may exercise a beneficial influence; are becoming more capable of intellectual happiness ourselves, and of leading others to enjoy it; more assimilated to God, and more fitted for a joyful reunion with those whom He has taken to Himself. If our conclusion as to the real nature of man be just, (and I know not how we are to avoid acknowledging it to be so), then what passes in the short span of bodily existence is but one part of a great whole; and in passing through that state which is the school of our intellectual nature, enjoying pleasure while pursuing the right course, and suffering pain when following the wrong one, we are only undergoing a

necessary preparation for a higher degree of happiness; after which, having gained the experience necessary to enable us to choose aright, we may find in the bosom of the Divinity and in the society of others perfected like ourselves, the entire felicity which we have sighed for.

Thus far philosophy speaks. Christianity goes farther, though in the same tone. Christianity says, "Man's path, even though thus fenced, may be mistaken," and it proceeds to offer a set of precepts which make that path still plainer; it offers more yet, it sets before him an exemplar of human virtue, made perfect by the indwelling of the Deity, and by showing how lovely such a life might be, even with no circumstance of worldly grandeur or pleasure to recommend it, has brought every feeling of man's heart into accordance with his true interests. "Never man spake like this man," "All were astonished at the gracious words which proceeded out of his mouth," &c. &c. sufficiently show how that bright pattern of excellence laid hold on the minds of the most indifferent.

Nor is this all: we have already seen that the qualities of the Divine nature may be argued

out by a sound philosophy. Man finds himself in a certain degree a partaker of that nature, therefore, by the necessary law of all existence, his happiness must be of the same kind; and to seek any other would be but the insanity of a man who should plunge into the arctic seas to follow the whale. If then, convinced of this truth, he school his mind to wish what the Deity wills; to seek, in short, the same felicity, he will no longer have to complain of his finite nature; for Infinite Power is already accomplishing his wish, almost before he has known how to shape it. He has no dread that the attainment of his object will be defeated; for he knows that if the scheme he has devised prove vain, it is only because it was not in reality calculated to promote the end he had in view, and his inmost heart thus becomes a spring of never-failing content and satisfaction, a well of living water, freshening and beautifying all around as well as all within.

None who have not tried are aware of the large influence which a soul thus constituted has, even upon the bodily health, though physicians have not unfrequently observed that a quiet and happy mind is the best medicine in illness. Sickness is one of those evils which

are thought the immediate infliction of the Deity, though were the matter better considered, it would appear that it is most generally of man's making; but even when thus produced, it may become a blessing instead of a misfortune, by steadily pursuing the same course. If in health, we can imitate the perfections and seek the felicity of the Deity, by diffusing happiness around us, and enjoying the contemplation of it; in sickness we may seek the knowledge which forms another part of His attributes. It is a false notion that application of the mind to science is impossible or hurtful, in such a state; on the contrary, it takes off the tedium of confinement, withdraws the attention from pain, and makes what would otherwise be wearisome, a source of enjoyment; for those who have active duties to fulfil, often have scanty leisure for acquiring what nevertheless they sigh for. In the quiet of a sick chamber knowledge may be sought and yet no duty neglected; and with convalescence comes the additional pleasure of feeling that we go forth to our duties with a mind strengthened by its high contemplations, and with increased powers of usefulness from the acquisition of knowledge. This is no imaginary picture; if the philosophy which the

writer now presents to those who, like him, need it for practical use, be worth any thing, let him who profits by it remember that it was so acquired. It was during months of illness that he stole time to hold intercourse with the master-minds of antiquity; and often has he hailed, almost with delight, the respite thus afforded him from worldly toil. If then, to an individual deeply involved in all the perplexities caused by man's perverse will, the mere schooling his wishes to the Divine similitude be productive of so much peace and happiness, what would be the consequence if a whole community were under the same influence? The question of "why evil is in the world?" would not then be asked; for there would be none. Health would not be worn out by extreme labour; for who that loved his neighbour would require or allow it? Hearts would not be broken by unkindness; for the follower of such a system "loves his brother." Disease would not be brought on by excess, or transmitted in the blood to an unfortunate progeny; for men would no longer debase themselves by sensuality. Science would meet and control the dangers arising from natural causes; and death itself would be but a pleasant journey to a hap-

pier land, where friends and kindred were awaiting us. Again I repeat that the mass of suffering which man sternly mounts upon to arraign the Deity, is heaped up by himself only, and might be swept away again by the same hands that placed it there. Three generations of a wise and virtuous race would nearly efface the mischiefs of all the ages of sin and sorrow which had preceded them. There is nothing in all this, probably, that has not been said before, and perhaps better said; but unfortunately, the necessity of using words as the medium of thought frequently leads us to forget that they are only the medium and not the ideas themselves. Thus we find it daily repeated that God is eternal, self-existent, almighty: and when these words are uttered it is thought sufficient. Among those who utter them, who is there who has accurately weighed the necessary conditions of such an existence? The most contradictory propositions are brought forward and insisted on, and none perceive the contradiction unless the very word should bear it upon its face. Thus, he who should assert that God is wise and ignorant, powerful and weak, at the same time, might be doubted; but he who asserts such changes of purpose in the Deity,

as we find resulting from the want of power or of knowledge in man, gains credit, because it is not perceived that omnipotence and omniscience leave no room for any such change, and that eternity and self-existence entirely forbid the possibility of it: this is but one of the many propositions of this kind which daily pass current in the world. If, therefore, an accurate notion of the nature of the ruling power on whom we depend be requisite to the understanding our position, and regulating our actions, it is of no small importance to awaken men's minds to the logical consequences of their admitted creed. Indeed, were this course generally followed, there would be an end of the dissensions which now disgrace the Christian world; for a really false opinion would soon manifest itself to the mind of the inquirer, by the absurdity of its consequences, and all other differences—which arise merely from taking words for ideas and then imagining that our neighbour means differently, because he uses a different word—would merge in the one truth which all love, and either seek, or think they have attained. I believe that if each of the words which have in turn been made the 'Shibboleth' of a party, had been subjected to such a process, we might

now be living in peace, "one fold, under one shepherd." Sure I am, that as THE TRUTH can be but ONE, there must be a fault in the course pursued, or those who have honestly sought it could not have remained, as,—alas for Christian charity!—many wise, and otherwise good men have remained,—in bitter opposition to each other.

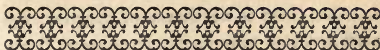
"The man is other and better than his belief," says Coleridge: so deep a thinker ought to have gone farther, and told us why it is so; for the maxim is a true one. Is it not that the conviction of the heart, from which his actions flow, finds imperfect expression in words, and that even those words fail to convey to others the meaning he has intended to give them? His words are attacked, and he defends them as the visible signs of what he thinks and feels; but are they so? Let any man try to express his own interior conviction in accurate terms, and see how many deep feelings of unseen realities, how many humble prostrations of human weakness before Divine perfection, are unsusceptible of any expression at all; and when he begins to attempt a definition, how his very soul groans over the unsuited tools he has to use; and when he has felt all this, let him, if he can, condemn

his neighbour's creed, when he sees his neighbour's life, and reads in that what he must have intended to express.

We have now seen what are the necessary conditions of self-existence. Will either Unitarians or Trinitarians dissent from this? Athanasius, the most decided of Trinitarians, expressed himself in nearly the same terms that I have used. Priestley could hardly have wished for any other definition. Why then have they been considered of different sects? Because each has attacked or defended *words;* and the *things* which those words were intended to convey a notion of, have not been duly considered; and then, when controversy once begins, and passion enters where placid reasoning alone should find place, adieu to the hope of brotherly fellowship! Evil feelings are engendered; the church of Christ is split; and he who endeavours to make peace by showing each party that in the heat of dispute both have gone too far, is looked upon as lukewarm in the cause, or perhaps as a traitor to that very faith which he is endeavouring to preserve "in the bond of unity."

The tradition of the church tells us that when the apostle John, sinking under the pressure of years and infirmity, could no longer preach to

his converts, he was wont to be carried in a chair into the midst of them, where he pronounced simply these words, "Children, love one another." If this was the last lesson of the disciple "whom Jesus loved," of one who had heard the gracious words of Him who "spake as never man spake," surely we shall do well to remember that "brotherly love" is orthodoxy, and that charitable indulgence, not unmeasured zeal, is "the fulfilling of the law."



PSYCHOLOGY.

IF Theology has been embarrassed by inadequate conceptions of the nature of the Self-Existent, Psychology has suffered no less from confined notions of the nature of man. Though it has been very generally believed that this nature is compound, and though the words "soul" and "body" are in every one's mouth, yet we find no distinct ideas respecting the functions of each, even among those who are the most decided in their assertion that such are the component parts of man. We find no great laws established by experimental proof, as in other sciences; no accurate classification; and he who, without a previously formed theory of his own to guide him through the labyrinth, should take up any of the works professedly written to explain the subject, would very probably find himself more bewildered when he had finished than when he began.

When a science is in this state of chaotic

disorder, there is no chance of progress; the very first step towards its advancement, therefore, must be a classification which may at least reduce the subjects it embraces to something like arrangement. It may be imperfect, it may even be erroneous; but at any rate, the objects requiring attention will have been disentangled from each other, and so placed that they may be viewed separately, and examined on all sides; it is easy then to shift their position if, after such examination, it should appear necessary.

But the very thing which makes classification needful makes it also difficult. Whoever may attempt it will be met by his contemporaries with the taunt, "What new sense has been given to you, that you imagine yourself able to do what abler minds have not accomplished?" Those who think that the adytum of the temple ought to be dark, or lighted only by the torch of the mystagogue for the entrance of the initiated, will denounce the endeavour to admit daylight as a sacrilege. What have the *people* to do in such matters? and what can a Pariah know of them? All this and more must be expected, but it alters not the case; a first step must be made, or a second never can be: and if the people, the multitude, the *οι πολλοι* (I

care not by what term of contempt I and my compeers may be denominated), if the masses, I say, are to be what God made them to be, something more must be done than to tell them that they have instinctive feelings given them by a benevolent Deity, which it is a sin to indulge; for which reason severe laws abridge their gratification as far as possible; and that they have a soul destined for an immortality of spiritual enjoyment which they have no means given them of preparing for. Something more than this, I repeat, is needful to make us fit denizens of heaven: we must know how much of what we now feel is to go with us beyond the grave, how far it is to be controlled; how far indulged. We must, in short, ascertain the boundary line between the animal and the immortal nature; and this must be done, not for the *few* who have grown pale over their midnight studies, but for the *many;* for those who can only snatch a moment from the labours of the day for a short book, and whose toil has made them sleep too soundly at night to allow of long speculations. The philosophy of the multitude must be as brief as it is practical.

We began with a slight classification of the phænomena of man's nature into

1. The instinctive emotions and appetites.
2. The faculties.
3. The will.

And I assumed that as the two first partook of the changes which the body undergoes, they were bodily; but that as the individual and intelligent will partakes of none of these changes, it was of a different nature. Had we never heard of soul and body, so marked a distinction in phænomena would have led us to look for a double principle to cause it; and I therefore propose to reduce man's nature to its ultimate elements, by arranging the whole under two simple divisions.

I. Material and animal functions subjected to bodily change, and subdivided into

1. Appetites.
2. Instinctive emotions.
3. Faculties.

II. Spiritual and unchanging functions.

The latter division only, is, strictly speaking, the province of Psychology: but in a nature so intimately blended, the one part so influences the other, that a system which should leave out either would be very imperfect. I therefore proceed to consider,

I. Material and animal functions subjected to bodily change.

1. I need not waste time in proving that appetites, such as hunger and the like, are a part of our bodily and animal nature. No one denies it; and whoever should doubt it might soon be convinced by trying the experiment of preventing their gratification. Man would perish from the earth under such a regimen.

2. There has been more doubt as to what I here call the instinctive emotions: anger, fear, and many other emotions of this kind, have generally been termed passions, and referred to the soul for their origin; but when it is considered that they rise involuntarily in the first instance, and are attended with such a change in the circulation, and other bodily functions, as to disorder the health, and even in some instances to cause instant death, and when, moreover, it is considered that these so called passions are requisite to the preservation and well-being of the species,—for anger impels us to self-defence, fear to the avoidance of danger, &c.—we shall be justified, I think, in giving them the appellation I have done; since, though passion, if we take it in the strict sense, means only a thing

suffered *passively;* yet in common parlance it has been strangely confounded in its meaning, and is not unfrequently so used as to signify a thing done *actively*. Of course from this class of instinctive emotions must be rejected some of the feelings hitherto classed among passions, such as Hope, which is attended with no bodily disorder, and has therefore no claim to the title of passion, or a thing suffered. It will not be necessary to specify every one of the emotions thus to be classed; it is so easy to examine whether any bodily disorder is ever occasioned by it, or not, that none can be at a loss in determining the question.

3. The faculties have been variously considered by different writers: but as a recapitulation of their opinions would take much space, those who wish to know what they are, must consult their works. Pursuing the inquiry on the same ground that I have taken with respect to the instinctive emotions, I find clear indications of bodily origin, in the fatigue occasioned to the brain by their exercise, the necessity for repose ere they can again be set to work, their complete derangement by bodily disease, their debility in the last decrepitude of age. We need hardly ask the physiologist for his assist-

ance here; common observation suffices for this conclusion. And here we may notice, that as the instinctive emotions are requisite for the preservation of the animal, so also are the faculties in a certain degree; for though the combinations effected in the brain may be applied to other purposes, which I shall presently speak of, yet the first and most obvious use is in the ministering to bodily needs;—contrivances for defence, for shelter, for procuring food, are the result of such combinations; and unarmed with natural covering or natural weapons as man is, it is evident that without these contrivances the species would soon perish. Thus far therefore we have a mere animal, with the properties and capacities requisite for his preservation.

II. Spiritual or unchanging functions.

These appear to be two: i. e. the intelligent will, and that species of memory which forms the consciousness of identity; and which—however ordinary recollections may be impaired by the injury or disease of the brain—never suffers any change from infancy to death, and even in sleep remains unaltered.

We have as yet considered man as an animal only, and have seen all parts of his frame acting harmoniously together; the appetites, and

the involuntary or instinctive emotions by turns stimulating the faculties to provide for the needs of the body, these faculties being operations of the brain, and therefore coming within reach of the mechanical action of the system. But another power now enters upon the scene, and, for good or for evil, not unfrequently thwarts and disorders the whole. The instinctive emotions, which in themselves are evanescent, are wrought up by this untiring energy into permanent affections. The faculties which naturally only act under the stimulus of bodily wants,—that is to say, under the impulses mechanically conveyed to the brain,—are now seized upon by this restless inquisitive power, and compelled, in spite of fatigue, and even utter derangement of health in consequence, to minister to its requisitions, and supply it with the information it wants; untired, unchanging, it drags on its weary slave with immitigable determination, till at last it scornfully casts it into the grave as no longer fit for its purpose, and asks for other worlds, and ages yet to come, to satisfy its impatient longings for wisdom or for enjoyment. But though, when speaking of functions, I have divided them into two, as manifesting themselves differently; it is clear

that they proceed from one principle; it is the conscious individual essence which pours itself forth in this energetic and unwearied activity, and is able, when it knows its powers, to appropriate to its own purposes the whole of the unrivalled machinery placed within its reach.

But though this nice mechanism be capable of responding to the touch of that power within, which makes man so godlike when his nature has its full play; it is too frequently left at the mercy of outward impressions, and remains the mere animal to the last: for we have already seen that the exertion of the intelligent will over the bodily functions is not requisite to their performance so as to preserve life. Man may exist as an animal, or at least very little removed from that state, and when the brain has never been exercised in those nicer operations which the individual essence can at its choice require from it, it becomes as unfit for use as the hands of a Hindoo devotee when he has resolutely kept them shut for ten years together. Active use is the necessary condition for keeping any bodily fibre in a healthy and serviceable state; and we see that this active use is stimulated by the sensations from without, which at our first entrance into the world are so abundant

in all directions. The first impulse of the child is a restless curiosity, and at the same time an endeavour to combine and arrange ideas from what he sees and hears. Sensation has done its work; the brain has perceived; the individual is beginning to discover the organ he has at his command, and he is already directing it to the inquiries needful for his information; but too frequently the child has no one who can reply to his inquiries; he gets weary of useless question, or is reproved for it; the brain consequently becomes inactive as to all its higher functions, and no farther progress is made. The will is either not exerted at all,—for the mere action of nerves of voluntary motion stimulated by sensation must not be confounded with the ruling individual will,—or if it be exerted, having no longer power over the faculties so as to acquire useful information, its whole energy is devoted to the giving force and permanence to the instinctive emotions, which being involuntary, never can slumber as the faculties are wont to do. The man becomes thus the creature of passion, and that immaterial essence which should have been the guide to all that is excellent and noble in knowledge and in feeling, panders only to the impulses of the

body, and degrades itself from its high dignity merely to sink both below the level of the brute; for the brute, when the appetite is satisfied, goes no farther; but bring the intelligent will once to aid, and the jaded appetite is pampered and stimulated; fresh excitement is sought, and the body is at last worn out by the endeavours of its unwearied ally to minister to its gratification.

In cases of idiocy it is evident that the brain never has attained a sufficient power for supplying the individual will with the information it needs; but the proverbial obstinacy of idiotic persons shows that this power is as strong in them as in others; and were a careful training given to such children, it would be found that they are capable of much more than is supposed.* I knew a family in humble life, some years ago, where three of the children were thus afflicted; two of them were trained as persons in that rank usually are, to labour, and attend the church on Sunday. The third, and youngest, was the mother's darling, and nothing was required of him. The first two remained weak in intellect, but capable of performing many

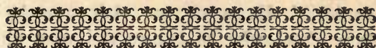
* See "Small Books," &c. No. 3. § 14.

manual labours; were honest and industrious in their way, and were conscientious in the discharge of their humble duties. The third was the reckless, spiteful idiot too often seen.

Again, in insanity we find a no less resolute will; but misled by the false report of the brain, it is devoted to useless or mischievous purposes; and here too it is probable, that were the office of the brain, of the instinctive emotions, and of the ruling will, duly distinguished, this most miserable of all calamities might be either wholly averted, or greatly mitigated. Its origin is either in a diseased state of the brain, from injury, or the violent action of some instinctive emotion, or a devotion of the cerebral power to one subject exclusively of all others, till it has no longer the power to apply to any but that. Now were the ruling will in the habit of claiming that supremacy which it *can* claim, it seems probable that in every one of these instances it might, if not prevent the evil wholly,—as it probably would in the two latter,—yet greatly mitigate it. Else how is it that we find in cases of confirmed insanity the fear of pain will curb the fit? Here the will is excited to use its power to avoid an evil, and for the time it uses it successfully.

Few know or believe the immense power which this undying energy is capable of exercising over the body, for it is only now and then that it is seen in full action; but that it is both master of, and widely different from the animal nature, may be sufficiently shown from those instances. For example, when a man resolves on putting an end to his existence by abstaining from food,—and this has been done,—the tyrannical sway exercised over every sensation and craving of the body, is complete and durable, as well as in entire contradiction to every impulse of the animal nature. Or if it be said that this has been merely the last resort of a man wearied out with suffering, let us take the case of one hazarding or throwing away his own life to save another from perishing. A stranger it may be, one from whom he has nothing to expect, and where he has no incitement but the intimate conviction that a higher and a nobler nature claims the sacrifice of the mere animal. He knows that he is rushing upon death, he feels probably some natural shudder in doing so; yet this is overruled, and he goes on with his resolute purpose. Take away the influence of such a principle within, and half the actions of men are utterly unaccountable; for it is the natural

tendency of all things to accomplish the end of their being; and if it be sentient, to be happy in doing so. The plant blossoms and bears fruit before it decays, and its life may be prolonged by preventing it from blossoming. The mere animal eats, drinks, propagates its species, and is satisfied; but man is always aiming at objects to which his life is frequently sacrificed, and no one calls him insane. On the contrary, in the proportion that he is ready with this sacrifice, he is honoured and esteemed; because every one has an anterior consciousness that it is what his own nature aspires to. He feels that he is now but the larva of himself, and that he has a higher career opening before him, where all that was beginning to develop itself will acquire perfection, where all the gentler sympathies of our nature may still find place and scope, and from whence the grosser animal gratifications alone will be banished, along with the earthly frame which required them.



PRACTICAL RESULTS.

"WHAT is a Religion? and what is a system of Philosophy? They are two different answers to the questions most interesting to man. Examine all the religions which have long held sway over the minds of men, all the philosophical systems which have united under their banner a large portion of the enlightened part of mankind, and you will find that these religions and their systems have one distinction common to both; that they have boldly proposed and solved the whole of those problems. It is by this character that we recognize a really great system, and we may truly say that if one of these questions has been prætermitted, it is but half a religion or half a system of philosophy. Would you have an example of the stretch and extent of a great religion, look at Christianity! Ask a Christian "whence the human race is derived?" He can tell you.—"What is man's object, and what his

destiny?" He can tell you. Ask a poor child from school, why he is here, and what will become of him after death? He will make you an answer full of sublime truths which probably he may not half understand, but which are not therefore the less admirable. Ask him, How the world was created, and why?—How the earth has been peopled?—why men suffer, and how all this will end?—He can tell. He knows the duties of man towards God and towards his fellow-men, and when he is older, and has learned the system more completely, he will not hesitate at all more respecting natural, political, and national rights; for each of these parts of knowledge flows as naturally from Christianity as light from the sun. Such is what I call a great system."

These are the words of a French philosopher who himself was not a Christian,* but I can

* Perhaps I ought rather to say, that disgusted with the narrow views of contending sects, he was unable to find any one to which he could associate himself, and thus, unphilosophic only in this, overlooked his own proposition, that great systems, whether of philosophy or religion, are only two modes of solving the same question, not two solutions; and that, therefore, he who professes a pure and true philosophy is a Christian, whether he knows it or not.

find no words which would more aptly trace the way in which a "great system" must influence all the relations of life; and most truly does he pronounce that to be but a half doctrine which is incapable of this extended rule over men's minds and actions. When, therefore, I come to the practical result of a scheme of philosophy which walks hand in hand with the "great system" which M. Jouffroy has so well described, it will not be astonishing if I find myself obliged to touch on many points where great differences of opinion have existed. To those who may not take the same view of the subject, I can only say with Themistocles, "Strike if you please, but hear me." Weigh at least, whether there be not some truth that deserves your farther attention in the propositions which at first may seem strange, and perhaps displeasing.

We have already considered the exterior and interior power in their separate nature and functions: we now come to the mutual relations which must subsist between them, and the influence these have on man's position, prospects, and final destiny. We have seen man endued with instincts and faculties purely corporeal in their origin and mode of exercise; and yet, in the midst of these corporeal instincts and faculties,

we find another power introduced of a different nature, capable of diverting them from their natural course, and exercising an almost illimitable sway over them; like the musical instruments which by their regular machinery can produce a set number of tunes, but yet have keys annexed by which a skilful player can produce harmony at his will; and this complex nature of man is the work of a Being who, having all power and all knowledge, must do what is best for the proposed end.

If we look through creation in every instance where we have an opportunity of watching the operations of *nature*, as writers on such subjects are wont to say, or as I should say, of the *Framer* of nature, we find no substance formed with particular properties for an especial occasion, which properties never come into use afterwards. Every chemist knows that each substance has its peculiar qualities and laws which avail equally be it free or in combination, be it part of an organized or an unorganized body; and that amid all the mutations which are continually going on, nothing is wasted nothing so far changed in nature that it cannot be resolved again into its component parts, which by the same unchanging laws form fresh com-

binations, each nevertheless still retaining the fundamental character impressed upon it. We see too that all organized beings,—I am not speaking now of man,— have exactly those qualities, organs, and impulses given them, which conduce to the end of their being; which end they scarcely ever fail to accomplish; the plant, the insect, the animal, have their different modes of life and production; but they live and produce; no property inherent in them interferes to prevent this. We further see that when we have established any great law of creation by reasonable induction, we can explain hitherto puzzling phenomena by a reference to these laws.

Upon these last grounds, then, I assume that man's instincts and faculties are given him for purposes of permanent utility extending beyond this life: because it is evident that he has a property inherent in him, which interferes with, and very frequently wholly prevents, the full development of his animal nature; and therefore that animal nature, and the period of its duration, is not all of man. And if any one objects that man is in a fallen state, and therefore that these instincts and faculties are corrupt, and that we are not to look for good, but for evil from them,

I reply, that those who make this objection doubtless will allow that when man came from the hands of his Maker, his nature, as well as all the rest of the new world was "very good." Now we have already seen that these instincts and faculties are corporeal; provided for by a very simple and complete mechanism, but still by mechanism, as much as the bending of the joints or the growth of the body; then these instincts and faculties were in man originally such as they now are, excepting in instances where they are impaired by disease, and are no more corrupt than his bones or his muscles; and it is only when the individual power interferes to give intensity and duration to these animal functions, that they run into excess, and thus become an evil, from the due balance between them being overthrown. It is no small happiness to the world that those kindly feelings which bind man to man, are all found among the instinctive emotions, which being consequent on the very frame of man, and altogether involuntary in the first instance, are therefore in no danger of being ever wholly stifled; while the sterner part of his nature which we have called *the faculties*, results from cerebral combinations produced by a voluntary act, and

therefore subsequent to the first impulse of sensation.

Let us now see how the individual is likely to be affected by this corporeal mechanism. He enters the world inexperienced and full of wonder at the scenes around him, and the first sensation that is awakened after that of mere appetite, is, love to the parent who cherishes him; the next, grief at the sight of an angry or a sad countenance. It is only gradually that the brain acquires power for its higher exercises, and long ere this has taken place, the feelings have taught the individual better than the most luminous argument could have done, that it is good to love those who are kind to us, and to avoid exciting their anger or their grief; and this is become so habitual, that a deviation from the usual course of feeling is painful in the first instance. Here then, the very first of instinctive emotions, provide a never-failing source of happy intercourse; and there is so much pleasure in yielding to them, that nothing further is requisite than a curbing power. The individual readily abandons himself to the gentle influence; but he may follow it too far. A parent or a companion may ask a wrong compliance: it is then that the intelligent will may

call in the aid of the faculties to combine arguments, and weigh consequences; and, sitting like a sovereign at his council board, finally resolve, that the petitioning feeling ought not to be attended to. How soon the brain shall be capable of thus giving counsel, depends on the wholesome exercise it has had; for where no stores of knowledge have been laid up, arguments cannot be found; and where the habit has not been acquired by daily use, combinations of ideas are formed with difficulty. It would seem that mere sensation had found itself the straightest road, and that the more complex convolutions in which, according to some, memory and the higher reasoning faculties are exercised, were so unaccustomed to be called into use, that the parts were grown stiff and inactive; nay, as we see that size and strength of limb is only gained by exercise, it is not impossible that a brain never called into use, may not even have its full proportions: and thus, from neglect in childhood, a physical incapacity may be engendered. Suppose this the case, and that either from want of exercise or of power, the faculties in their higher uses are not duly developed, it follows that the individual will, having no guide but the

emotions, will follow them blindly, they themselves being but a blind impulse; and when "the blind lead the blind, both fall into the ditch." But this is no corruption of nature, all these functions are useful and good in themselves, it is merely a neglect of one part which throws the rest off their balance.

Let us now suppose that the faculties having been cultivated to the utmost, the will has listened to them almost exclusively: a harsh character will be engendered; for no human being is perfect, and if we bestow our regard *only* in the ratio of specific merit, we shall seldom find enough excellence meet our notice to justify any large share of it. It is then that a yet more powerful instinct steps in: love between the sexes teaches at once the generous self-devotion which the combinations of rational argument might have been long in inculcating, and perhaps have attempted ineffectually; and all the gentler social relations arise out of it to sweeten life, and give a yet higher scope to our wishes; for who that truly loves will be satisfied that the union shall be broken at the gates of the grave, which has been so sweet an one through life? And how often do we see that he who cared not if his loose companions looked

upon his vices, has shrunk from, and perhaps quitted them, when he thought of the innocent child whom he could not bear to contaminate! And thus we see two kinds of animal functions mutually balancing each other, uniting to school the individual will to all that is amiable and exalted. The instinctive emotions softening the sternness of the faculties, the faculties curbing the animal force of the emotions; and the will, impelled by the solicitations of the one, and guided by the information and caution of the other, acquiring by degrees those habits of judging and feeling rightly, which qualify man for the spiritual felicity of his Creator. He has learned the enjoyment of benevolence and the excellence of knowledge, and his heaven has already begun on this side the tomb; and thus, though these emotions and these faculties may cease with the bodily mechanism which causes them, they have stamped their impress on the individual. Like metal poured from the furnace into a mould, which retains for ever the form so acquired, though the mould be but of earth; the will has acquired the character it will carry with it into eternity, though the mould in which it was cast be returned to its dust.

Can the Christian who holds Philosophy to

be "foolishness," deny that these warm though instinctive emotions, these aspiring faculties, are in exact conformity with the rule he acknowledges? The God who made man was not so limited in power or knowledge, or so wanting in benevolence, as to have given him properties unfitted for the fulfilment of his high destiny. The Saviour himself has pronounced that a man shall leave all else to "cleave to his wife." He has given as the badge of his followers, that they should "love one another"—as the rule of our life, that we should strive to be "perfect, as our Father in heaven is perfect." We look into our hearts, and we find that we are naturally led to love the woman of our choice, beyond all other things; that we cannot be happy, or even retain a sane mind and healthy body without social intercourse, and that we aspire to knowledge, to greatness, to immortality, to perfection in short, with a longing that is never satisfied in this life, yet never wholly subdued. Is that philosophy *foolishness*, which by rational argument deduces the truths of the gospel from the very nature of things, and thus leaves no room for hesitation or disbelief?

But if this be the case—if a due balance of instincts and faculties be needful to school the Will, so as to fit it for the only felicity suited to its nature—what sort of training ought man to have, and what must be the sensations of one who feels this truth deeply, when he looks round on the habits and maxims of society, and the principles on which legislation is too generally founded? "The poor man must learn to restrain his passions," say political economists:—let them first define what passion means. It is convenient when an ambiguous term hides, instead of explaining the intention; and this well-sounding term means, that, because it suits those who have the power, to retain the soil as their own property, therefore the man who is debarred from any share of it, is to be debarred also from the due perfection of his nature. Those very instincts given to mould it to benevolence and kindness are to be rooted out; or, if God be stronger than man, and this endeavour fail, they are to be made instruments of evil instead of good, and what would have been the parent of all the lovely social affections is to become themere appetite of the brute, indulged when the animal nature is importu-

nate, but so indulged as to degrade and deteriorate, instead of improving the individual.

"We must have servants and labourers, hewers of wood and drawers of water," say the rich and the luxurious; "it is therefore idle to teach the poor what will only set them above their work." I only ask, does it so really? Where are the instances of the real lover of intellectual improvement, who has been inefficient in what he has undertaken? But suppose it were as is objected,—suppose a few hours were lost, or a few shillings spent on intellectual pleasures—do we never see either one or the other wasted at the beer house? And which is the better way of spending them? But setting aside all this, setting aside,—what I have always found,—that mental cultivation strengthens our power for whatever we undertake; I ask again, what right have you to cramp and stifle the intellectual faculties of a large portion of your fellow creatures, in order that you may purchase their bodily labour, even supposing that you could not otherwise secure it?—to rob men of the best gift God has given them, in order that you may "fare sumptuously every day," and "be clothed in purple and fine

linen." The mutes of the seraglio were deprived of the power of speech, that they might not tell the secrets of their master. Would you condemn as cruelty the depriving a child of one bodily organ, and yet justify the cramping the whole system of mental powers, merely that there may be a Pariah caste—a Helot race,—who shall never rise above the soil they tread on, and look up to their masters as to beings of another species? If such were to be the enduring state of society, there would be some justification for those who might strive to overturn all existing institutions, in the hope that human nature would find means to assert its rights in the confusion. Such are not the lessons of the gospel, for "there is no respect of persons" before God, and yet probably never till now, and in this so called free land of England, was the distinction of rank made to press so heavily on the poor man. The slave in Greece and Rome was in some things better off. He was instructed that he might be serviceable; and finished, not unfrequently, by being the friend and companion of his master as his freed man. The mistress and her female slave sate and span together. In the modern states of continental Europe, even, the servant or the

labourer enjoys a certain degree of familiarity; and is in consequence more contented, though poorer. The increase of riches and refinement in England has given the upper classes a character of their own;—with a selfish exclusiveness, they wish to retain this distinction; and with an instinctive feeling that intellectual strength is power, however the maxim may have been hackneyed and ridiculed, they hide from their own hearts, even, the uneasy dread of being encroached on, under the specious argument that for the poor man his Bible suffices. A blessed and cheering book it is doubtless; but how much richer a harvest of useful precept does it afford to those whose minds have been enlarged by further culture: how many mistakes would be avoided if the great principles of Philosophy were better studied; how much light would be thrown on it if something were known of the times, the places where, and the people to whom its words were spoken. The Bible alone is not enough; the mind requires relaxation: the commonest events of England raise curiosity respecting other lands and habits of life; and the young who hear a sailor narrating the wonders of his voyages, or the soldier of his campaigns, naturally wish to know something

about the things they hear of. Why is innocent pleasure to be denied them? We should have a more moral population if amusements of a higher and more intellectual character were placed within their reach. It is not enough to give them food and raiment merely, they feel the wish to be respected as men.

Let me not be misunderstood. I call for no agrarian law, no equality, which if established to-day, must cease to-morrow, from the very difference of individual strength and inclination; but I call for justice;—I call upon legislators to remember what God remembers, i. e. "whereof we are made." I call upon them not to damn their immortal fellow-men, by curbing with all the force of stringent laws on the one hand, and cold neglect on the other, the development of a nature which God looked upon when he had made it, and lo, "it was very good." Interested men have parted what ought to have been joined. Philosophy and Christianity have been severed, and both have been made to speak a language foreign to their purpose; but though man for a time may obscure those eternal verities, it is but like the smoke which hides the sun; the light must break forth again; and let us thank God that it must.

It may be asked what I would substitute for the order of things I complain of? This is the ready way of getting rid of disagreeable representations, yet I will not shrink from this either; but the subject is large enough to require to be treated separately, and my business here is with the establishment of great principles; these once established, details spring naturally from them. I return therefore for the present to man and his nature, position, prospects, and final destiny. I have assumed, upon what I think sufficient ground, that all the phænomena of our nature are to be referred to animal appetite, instinctive emotions, faculties, and intelligent will, coupled with that memory which constitutes the perception of identity; and I have assumed farther, that the last class of phænomena only, can be considered as properly belonging to the operations of the soul. I have also stated that an essential part of the great Self-Existent Cause of all things is a free and governing Will. Man therefore in this bears the image of his Maker; and inasmuch as he partakes in a certain degree of the nature of his Creator, his happiness and his destiny must be of a kind somewhat analogous. The felicity of the Creator, as far as we can judge, must consist in the constant

harmony of his nature with his acts; in the will to do what is best, and the power to effect it; or, in other words, in unbounded knowledge, power, and benevolence. Now, though man's finite nature can follow but at humble distance, it *can* follow. He may act in conformity to his nature; he may delight in conferring happiness, and in seeking knowledge: and I believe all who have tried the experiment will bear testimony that this course confers, even in this life, a peace of mind, a joy even in the midst of the turmoils of the world, which is more akin to heaven than earth.

Christianity teaches this, but in a simpler manner, by precept without argument; and it might therefore seem at first sight that the argument was superfluous: but it is not; for those who attend only to the precept are apt to consider the command to "love our neighbour,"—to "be conformed to Christ,"—to "be perfect as our Father which is in heaven is perfect,"—and the announcement of the misery that would attend the neglect of these commands,—as *merely arbitrary* laws, established by the Creator for reasons known only to himself; and He is thus made to appear as a despotic sove-

reign, to be feared because he has power to punish the infraction of his laws, rather than as an object of grateful and affectionate adoration, no less for the good he has given, than for what he has promised. Take the argument with the precept—shew that it is in the nature of things that whatever felicity an intellectual being is capable of, must be akin to that enjoyed by the Deity; and that therefore if we seek happiness in any other direction, we shall necessarily fail of our object—and we immediately see the fatherly kindness of the command; and the very announcement that any other course would be attended with perdurable misery, instead of appearing in the light of a vindictive denunciation of punishment shews itself to be what it really is—the caution of an affectionate and anxious parent, who

> "metuensque moneret
> Acres esse viros, cum dura prælia gente;"

and does not send forth his child to the combat till he has given him every counsel, and provided him with every defence which the fondest concern could dictate.

This is not, I am aware, the most usual mode

of viewing the subject, and it is perhaps because it is not, that our religion is frequently cold and unprofitable. If the conforming our will to the will of the Deity, or in other words, the finding our pleasure in the same objects, be requisite to our happiness, it is clear that *fear* will be a very ineffectual agent in the business. We may choose a certain course of action because we dread the punishment consequent on the contrary course, but we shall not do so because it is a *pleasure* to us. Even the most unphilosophical religious teacher will allow that this is not the state of mind which the true Christian should aim at, for says St. John, "Perfect love casteth out fear;" and nothing can be juster than the distinction made by the late Alexander Knox, between the imperfect Christian who *fears*, and the perfect one who *loves;* for as the doing an act under the dread of punishment is but a yielding of the will to one of the least exalted of the animal emotions, so it tends very little, if at all, to the amelioration of the character. The evil actions which might engender evil habits have been avoided, but we have accustomed ourselves to be actuated by a cowardly motive which a great mind ought to despise, and a Christian to

eschew. Added to all this, the emotion which is the foundation of this kind of virtue is of a painful nature, and therefore another instinctive emotion,—that of shrinking from present suffering,—very quickly counteracts it; for in proportion as the fear is great, will be the effort of nature to allay or stifle it; thus the small influence it exorcises over the will is transitory also.

It is no new discovery of mine that we must do what we like, or in other words, like what we do, in order to be happy. All men know and act upon this principle; can we suppose it unknown to Him who made us? and can we suppose also, that knowing the conformity of our will to His to be our happiness, He would take by preference so inadequate an agent as fear, to lead us to identify ourselves with Him? for this identity of will with the Deity, it cannot be too often repeated, is the sum and substance of religion as well as of philosophy. We are to become, as it were, a part of the Divine essence; His *children;* one in our interests, our affections, our designs: and thus identified with the Father of our love, we have His wisdom for our guide, His power to effect our utmost desires. A reli-

gion made up of terrors offers no attraction; we only half believe it, for it is repugnant to all our rational and instinctive feelings; it is unlovely; we cannot cherish it in our hearts as the source of happiness, or keep it beside us in our lighter hours as our companion and guide. On the contrary, the philosophic view being in itself pleasant, never seems importunate or misplaced: it lays hold on our feelings, and dwells with them till it becomes a constant principle of action. It is rational, and satisfies the intellect; and the will thus learning to love what is both agreeable and wise, all inclination to any other course disappears. We feel that by pursuing a different one we should be unhappy; for it is not till we have depraved our nature that we make even a step in the wrong path without pain, and what at first was weighed and judged fitting, becomes at last so habitual, that we may act almost without reflection, and act right.

There is always one great obstacle to the reception of the simple religion or philosophy (for I know no difference between them), taught by Christ during his ministry on earth; it is its *very simplicity*. It is hard to persuade men that it is not some "great thing" that is re-

quired of them; like Naaman, who despised the order to "wash and be clean" of his leprosy. Yet it is this simplicity, this conformity to common sense and common feeling, which proves its divinity the most decidedly; for the law, and the nature to be governed by that law, have evidently been the work of the same hand. "Est enim virtus nihil aliud quam in se perfecta et ad summum perducta natura,"* said the Roman philosopher long ago, and it is a truth well worth remembering. The same objection that is now made to the rational views of Christianity, viz., that it makes its professors men of this world, was made to its first great teacher; "Behold a glutton and a wine-bibber, a friend of publicans and sinners." Yet when the Saviour thought it not beneath him to sit at the table of Zaccheus at what we should now call a large dinner party, it is evident that no sour restraints are imposed on the Christian, even if he have never heard of any rule of life but the following His steps who was sent to be an example for us. The Saviour did not sit at that table in vain; we hear of no severe reproofs; no stern lecture;

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* "Virtue is nothing but the utmost perfection of our nature."—Cic. *de Legib.* l. i. c. ix. 25.

but he who knew well what man's affections could do, won the heart of Zaccheus. "The half of my goods I give to the poor, and if I have done any wrong to any man, I restore him fourfold," was the resolution taken by the giver of the feast at that dinner; and it is thus that the servant of Christ, the philosopher in the true sense of the word—for what is love of wisdom but love of the wisdom or λογος of God?—it is thus, I say, that the servant of Christ may move in the world, blessing and blessed. Polished, eloquent, dignified, Christ exhibited, amid the world which he did not fly from, a pattern of everything that was attractive in man. So may, and so should the Christian; and thus sanctify and purify society by his presence and example, till the precepts of our great Master become its precepts also; till forgiveness of injuries and purity of life be thought as necessary to the character of a gentleman, as truth is even now; till amusements and business, trade and politics, shall alike own the healing influence, and "the kingdoms of the world" become what,—notwithstanding the boastful title of Christendom,*—

* The domain of Christ.

they never have been yet, "the kingdoms of God and of his Christ."

It was the pure philosophy of Christianity, its exact accordance with every want and wish of our nature, that spread the doctrine of the poor fishermen of Galilee through the palaces and the schools, no less than the shops and the farms, of Greece and Rome. It has now ceased to spread, and why? Is it not because its Philosophy is forgotten? Is it not that by being made to consist in a certain set of mysterious dogmata which it is almost forbidden to examine, it is put on a level with those false systems which shrink from the light, because they know they will suffer from being seen when exposed to it? It was not thus that Christianity was *first* preached to the world. Its teachers and its martyrs appealed to its rationality, to its accordance with the highest conceptions of the wisest and the best of the Grecian sages. They contrasted its purity with the abominations of Paganism; the brotherly love of its followers, with the ferocity, treachery and hatred of the rest of the world; they shewed that there must be a God, and that He could be no other than they described. The

Eternal God, said they, must be essentially rational. Exerted or not, the wisdom to know, and the power to act must be co-eternal in him. We do not worship two Gods, as you object to us; the λογος (rational faculty) of God, animated a human form, and spoke to us through human lips, "God was in Christ reconciling the world to himself," and him we worship. We do not say that our God suffered or died. The body which he wore as a raiment was sacrificed, but God is impassible, ONE SELF-EXISTENT ETERNAL MIND.* It was thus that the early apologists for Christianity explained its tenets to the Pagan world; and the Pagan world received them. What have we gained by abandoning the philosophy of these Martyrs of the truth? We have abundance of technical terms; but have we the *Spirit* of the Gospel? Do we bear the badge of Christ, "hereby shall men know that ye are my disciples, that ye love one another?" If we do not—if rich and poor, Dissenter and Churchman, Romanist and Socinian, are, as it were, separate classes that hold no fellowship together—then is our Christianity

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* Vide Tertullian, Athenagoras, Arnobius, &c. &c.

as faulty as our philosophy—we have "the *form* of Godliness," but not "the *power* thereof," and however we may boast "the temple of the Lord" (and, blessed be God, it does yet afford shelter to some whom their Lord at his coming will own as his true disciples), we may find at last that phrases are of less importance than motives; and see,—Heaven grant that it may not be too late!—that "God is no respecter of persons," but that "in every nation he that feareth him and worketh righteousness is accepted with him."

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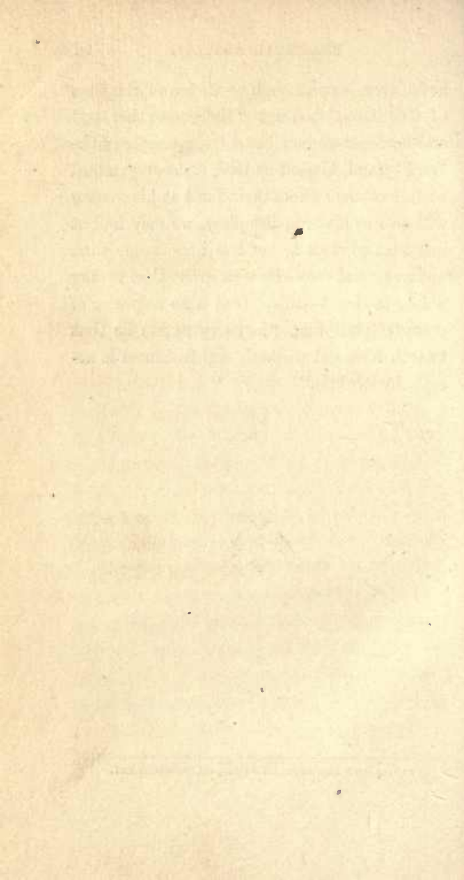

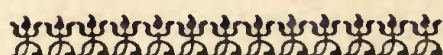

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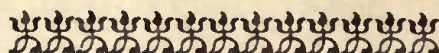

THE CONNECTION BETWEEN PHYSIOLOGY AND INTELLECTUAL PHILOSOPHY.

COMMUNICATED TO THE MEMBERS AT THE ROYAL INSTITUTION OF GREAT BRITAIN, ON FRIDAY EVENING, MAY 14TH, 1841.

BY JOHN BARLOW, M.A.

OF TRINITY COLLEGE, CAMBRIDGE; FELLOW OF THE ROYAL, LINNÆAN, AND ZOOLOGICAL SOCIETIES; MEMBER OF THE ROYAL INSTITUTION; RECTOR OF LITTLE BOWDEN, NORTHAMPTONSHIRE, AND MINISTER OF DUKE STREET CHAPEL, WESTMINSTER.

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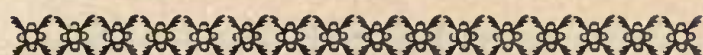


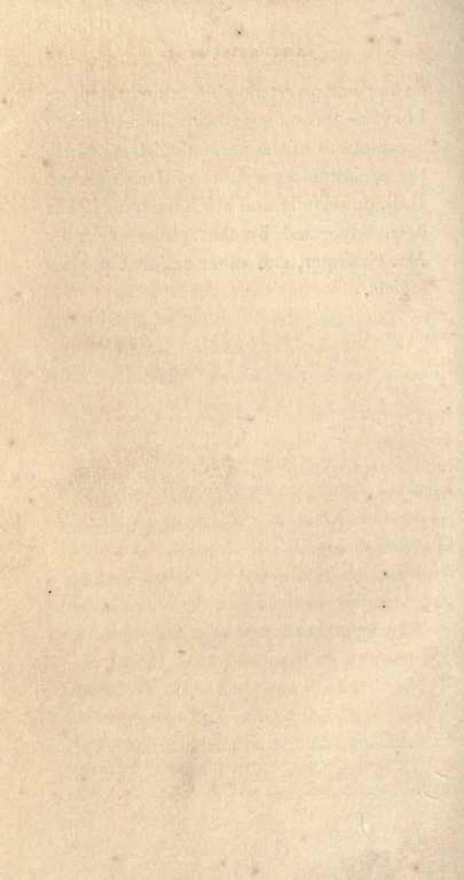
ADVERTISEMENT.

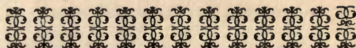
IN complying with the wish of those friends who requested me to offer this Lecture to the Public, I am extremely anxious to serve what I believe and hope to be an increasing class of my countrymen. It is my strong desire to benefit those who, though eager for information, cannot afford much time or much money for the prosecution of philosophical inquiries. It is then to the intelligent artizan, who prefers the Mechanics' Institution to the poisonous atmosphere and contaminating society of the gin-shop: it is to the agriculturist and the tradesman, who have discovered that an evening spent in the smoking-club is not productive of enjoyment equal to that derived from the perusal of such books as awaken a spirit of research in their children, that I dedicate this volume.

In revising it, I have been aided by the works of many eminent physiologists, and to the advice of many kind contemporaries. Among the latter, I may reckon the Author of "*Philosophical Theories and Philosophical Experience*," to whose work, through the medium of a friend, I had access while it was yet in manuscript, and whose object it has been, in common with some other of his intimates, to bring philosophy into a form that might benefit the mass of mankind, instead of being the mere luxury of a few learned men.

But to name the authors I have consulted, and the persons to whom I owe obligations, would be mere ostentation. It is enough to say that I have not knowingly neglected any source of accessible information. While I have striven to make these pages familiar and intelligible to all, I have never been led to adduce a doubtful in preference to a sounder theory, by the greater ease with which the more questionable doctrine might be expressed. At the same time I have avoided entering

on any controverted subject; and therefore I have neither engaged with the interesting speculations of the phrenologists, nor with the excitomotory system of Dr. Marshall Hall, powerfully and attractively as it has been advocated by that philosopher, by Mr. Grainger, and other eminent physiologists.





CONNECTION BETWEEN PHYSIOLOGY AND INTELLECTUAL PHILOSOPHY.

I.

1. THERE is probably no man who ever thinks at all, who does not sometimes ask himself how that thought is accomplished; how he is so linked to, yet separate from, the exterior world; and how and why he is different from the tribes of sentient beings which surround him. He has seen the progress of human nature almost unlimited; yet a disease, the work of a moment, leaves this half godlike creature a helpless and unreasoning animal. He shrinks with a kind of instinctive horror from a state which would yet be the natural and happy one of many of those classes of sentient beings, and anxiously asks himself, "What then is his destination? What the ultimate object of his existence? These are a few of those riddles of life, which however little they may form the topics of general conversation, lie uneasily in the secret recesses of most men's minds; and if in our subject

of this evening I can solve some of them, my hearers will probably not think their attention ill bestowed.

2. The earth, the water, and the air, are thickly peopled with various forms of living creatures: it is therefore desirable no less for the common intercourse of life than for scientific purposes, that these animated beings should be grouped together on some principle of mutual resemblance: accordingly, systems of classification have been in use from the very earliest periods. I do not now purpose to enter into the history or the comparative merits of these modes of classification; it is sufficient to select the one which I believe to be most philosophical, which I know to be best adapted to make my views intelligible, and which originates from the most eminent physiologists of our time. It is based on the difference of the *nervous system* in the respective classes, which is more and more developed in each, till it arrives at its final perfection in man.

a. *Crypto-neura*, the hidden-nerved.—*Rudolphi.**

* Beyträge sur Anthropologie, quoted by Jones, General Outline of Animal Kingdom, p. 6.

This includes coral insects, madrepores, sea-anemones, sea-nettles, hydatids, flukes, some abdominal worms, &c.

In these animals,[*] "The neurine or nervous matter, if existing at all, being incorporated with the other tissues, cannot be demonstrated as forming a separate system."

b. *Nemato-neura,* the thread-nerved.—*Owen.*

This includes many of the infusorial and microscopic animalcules, and (what the ordinary observer is more familiar with) star-fishes, sea-urchins, &c.

In these animals there is usually found a threadlike ring round the gullet, from whence minute filaments occasionally proceed to other parts of the body.

c. *Homogangliata,* animals whose ganglia are symmetrically arranged.—*Owen.*

This division comprehends (together with less known animals) leeches, earth-worms, scolopendras, insects, scorpions, spiders, lobsters, crabs, &c. This division is characterized by having the nervous masses (*ganglia*) distributed over the

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[*] Solly on the Human Brain, p. 5.

body at regular intervals, corresponding to its well-defined segments.

d. *Heterogangliata*, animals in which the arrangement of the ganglia is not symmetrical.—*Owen.*

In this division are found barnacles, oysters, muscles, snails, cuttle-fish, &c.

In this large group of animals, that symmetrical arrangement of parts so conspicuous in the ray of the star-fish, the segment of the insect, &c. is no longer observable; and the nervous system is as irregular in its distribution as the organs which it supplies are disproportionate to each other in their size.

e. *Myelencephala*, animals possessing a brain in a bony skull.—*Owen.*

This group requires no additional description at present; it comprehends fishes, frogs, reptiles, birds, mammalia, and at the head of these, Man.

3. It will be observed in the foregoing table that a nervous system has been traced in all animals (that is, in all beings that can feel and move) except in those comprehended in the division *a.* But it is extremely probable that this system also exists in the *crypto-*

neura, although its presence has not yet been detected in them,* since they exhibit sensation and voluntary powers. The nervous system consists

1. Of nerves and irregularly shaped masses of nervous matter, called ganglia.
2. Of a superadded brain, or as some have considered it, a collection of ganglia, connected with the organs of sense. This brain is always defended by a bony case, or skull. It is found only in the animals of division *e.*

When examined by the naked eye and the finger, a nerve is a soft, white, thread-like substance. In its course it resembles a leafless branch. It spreads out into small nervelets or filaments, and thus diminishes or increases in size according as it is traced *from* or *towards* the central cord or ring in which it originates. But when carefully viewed by the microscope,† each nerve is found to be a mere bundle of extremely small tubular filaments, containing a sort of half fluid pith. These are separately enclosed and connected

* Carpenter's Inaugural Dissertation, p. 76.

† Carpenter's Principles of Physiology, p. 42.

together by a covering of a very delicate texture, and the whole is cased in a thin membranous sheath. These fibrils sometimes unite with, sometimes cross over each other, sometimes form new groups with detachments from other bundles, sometimes are twisted over each other: but in no instance does the minutest fibril so penetrate another that there can be a mixture of their component particles. Therefore, although the number of nervous filaments is immense, there can be no confusion in the discharge of their functions. This is extremely important, as proving that there is no point of any bodily organ without an entire nervous apparatus exclusively appropriated to it.

4. Experience has shown that the intervention of nerves is absolutely necessary to the continuance of animal life, the reception of sensation, and the production of movement. Of these functions, the first named is also first developed. Organic life is possessed no less by the rooted zoophyte, which seems scarcely to have any consciousness of the exterior world, than it is by man. But as all the actions of man are more or less under the control of his rational faculties, it is necessary

that all the human nerves, even those which would seem to have no other office but to maintain the spontaneous actions of organic life, should be in connection with the instruments of the mental faculties. Accordingly, the series of nerves and ganglia which send out branches to every part connected with respiration, nutrition, and circulation, and constitute what is called the sympathetic system, are united by interchange of fibres with the spinal cord, and are thus connected with the brain.

5. The analysis of animal bodies gives about four elementary substances (hydrogen, oxygen, carbon, and nitrogen), which are found in like manner to compose the air that we breathe and the food that we eat: yet no human art has succeeded in compounding from them the smallest particle of organized matter, and we remain in great measure ignorant of the exact nature of the changes which convert food and air into the texture of the body. All that we know is, that the *sympathetic system* is the immediate instrument of effecting these changes, and that by some yet undiscovered properties of its nerves and ganglia, inanimate matter is made to share

the life of the part to which it is assimilated. It is remarkable that, unlike all other nerves, those connected with the system we are describing are neither susceptible of sensation so long as they continue in a healthy state, nor do they require an effort of the mind to keep them in action. The organs supplied by the sympathetic nerves are equally unlike the other members of the body in properties and in structure. For the limbs are disabled for a time by fatigue after long continued exertion, whereas the heart, lungs, &c. whose vital action is sustained by this system, never require rest, although always in exercise. As it is essential to our existence that the operation of these organs should be unintermitting, it is most fortunate for us that they so rarely excite our notice; for we should never enjoy a moment's repose, were it necessary to keep up the circulation, respiration, &c. by a constant attention to them. And yet though this system exacts so little from our intellectual powers, rejects the control of our will, and rarely disturbs us by exciting a sensation, it nevertheless does strongly sympathize with our bodily and mental feelings. The heart whose unwearied and unfelt movements are the

result of its influence, throbs uneasily during the period of anxious and fearful expectation, and so forcible is the impulse given by powerful emotion, as sometimes to rupture the parts by a rush of blood. I have already touched on the connection of nerves by which this is effected, and it must be noticed again when we come to treat of instinctive emotions.

6. Such then is the apparatus of mere *organic* life. But this life requires support and defence in all but the very lowest division of the animal kingdom. The *crypto-neura* are indeed, without exception, inhabitants of fluids; they therefore depend for subsistence on the casual nutriment that may be floated towards them: their bodies too, like plants, may be mutilated to a great extent, and yet preserve their vitality, as they are capable of reproducing a severed part: but it is not so with the higher orders of animals: with them dismemberment is fatal, or at best irreparable. These also have to select or to seek their food, and must be warned against the approach of danger: a further apparatus of nerves is accordingly provided, by which they can take cognizance of external objects, and these nerves are usually termed the *nerves of the*

senses. I shall not stay to inquire in how large a degree the inferior orders of animals possess them; in the higher they consist of smell, sight, hearing, taste, and touch. For all but the last named, a system of nerves within the skull, and in direct communication with the brain, is provided; whereas, the sense of touch being distributed over the whole body, is conveyed to the common centre of sensation by an immense number of nervous filaments, which either plunge into the spinal cord through small openings in the bone provided for them, and thus find their way to the brain, or are immediately connected with it.

7. Thus far we have described the machinery of life and sensation only, but it is further necessary that the living sentient animal should have the means of preserving his existence, of seeking pleasure, and of avoiding pain. This is accordingly provided for by another set of nerves, *the nerves of voluntary motion.* The operation of these nerves however is, in respect of direction, opposite to that of the nerves of sensation. It is by means of the latter that constant communications from all parts of the body *to* the brain are

carried on. The nerves of motion on the contrary issue *from* the brain, and convey its mandates to whatever part it would control. This constant interchange somewhat resembles what is carried on between the provinces and the capital by the mail-trains. The nerve of sensation, like the train which conveys letters to the capital, receives continual contributions from the tracts which it passes through, until the whole, compressed into the smallest compass, is delivered at the central post-office: and in like manner the nerve of motion, like the out-train, keeps sending forth its district mails at each successive station, until the most distant one is delivered at the terminus.

8. Thus we have three distinct systems of nervous mechanism in the living body, each dependent on the other, namely,

I. The unconscious involuntary nerves of life;

II. The conductors of external and internal feelings to the brain;

III. The conveyers of volition *from* the brain to the organs fitted for action;

which are respectively termed the *sympathetic*, the *sensitive*, and the *motor* nerves.

9. The brain therefore, in connection with

the spinal cord, may be considered as forming the great central apparatus of life and action. Its substance differs only in its *arrangement* from that of the nerves and ganglia; both consist of a *white* and a *gray* matter. Minute blood vessels abound in the gray substance, which, when observed with a high magnifying power, consists of extremely small fibres, interspersed with granules. The white substance shows continuations of these fibres gradually enlarging in their dimensions, and here the blood vessels are much rarer.

10. The ganglia and nerves of the *sympathetic system*, which, as we have already seen, acts mainly by *its own energy*, are largely supplied with the *gray* matter; the spinal nerves are chiefly composed of the *white*; hence, and from other observations, it has been conjectured with considerable show of reason, that the gray substance is a generator of action while the white is only a conductor.* If this be so, we may regard the gray matter as the sovereign power, receiving information *from*, and sending out mandates *to* all parts by means of the white medullary matter

* Solly on the Human Brain, pp. 19, 94, 401.

of the brain and nerves; but in different provinces delegating its power to a set of viceregal ganglia, with which nevertheless it keeps up some communication in order that all parts of the empire may be governed by the same laws. Among the lower tribes of animals this substance is much less abundant, the surface of the brain being much less convoluted, whereas in man, it appears as if crumpled together so as to pack the largest quantity into the smallest possible space.*

11. Having now given a description of the organs which carry on the functions of life and intelligence, it remains to show from a few facts that such is really their office: and here we must enter into the melancholy details of disease and suffering. For as long as all the organs of our bodies continue to execute their functions duly, it is difficult to say where the power is generated in that nicely adjusted machine. It is not till we see unwonted effects produced on the particular nerves by disease or violent injury, that we can distinguish their use. It is too well known that living animals have been mutilated in the prosecution of

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* Solly on the Human Brain, pp. 19, 94, 401.

these researches; I will not shock your feelings by the details of experiments which I trust will never be repeated; for physiologists as well as legislators seem now to be convinced that what is extorted by tortures is not to be relied on. Pain and loss of blood must evidently disorder the whole frame too much to allow any certain inferences to be drawn from the results of injuries to particular parts, even supposing, what no one has *completely* proved, that the fibril conveying the sensation of touch conveys also the sensation of pain; for instances are known where the one sensation has been lost without losing the other. To the honour of our country be it said that English philosophers have been the first to denounce these mutilations for their uselessness as well as their barbarity: they have taught us that physiology, like other sciences, must rest on patient, accurate, and recorded observations; and until these observations have been carried on for a longer time, though we may gather from facts that certain faculties are the functions of the brain as a material organ, we can hardly attempt to go into the minute details of their location there.

12. It is to the reports of the hospital that we must refer for proofs of the different functions of the nervous fibres, and the influence of the brain over them; and for this purpose* it is sufficient to notice that in palsy, which results from an injury within the skull, the limbs of one side, or of the whole body, according as the injury is more or less extensive, are deprived sometimes of motion, retaining sensation; sometimes of sensation, retaining motion—that the division of one nervous trunk issuing from the brain will impede digestion; of another, will no less disorder respiration—that by a tumour on one part of the cavity of the skull, the muscular power of one side of the face will be lost, so that the odd spectacle may actually be seen of a man laughing on one side of his mouth; in another, the sensation on one side of the face will be so lost that the eye becomes insensible of the presence of dust or straws while the other side retains it.†

13. As a proof that sensation travels from the extremities of the body along the nerves to the brain, we may mention the fact that

* Bell on Nerves, p. 114. † Solly on H. Mayo.

when a part containing the termination of any nerve is amputated, the pain felt in the extremities of the now shortened fibres of that nerve, is referred by the patient to the member which in their perfect state they supplied. Thus when a limb, for instance, has been cut off, the patient not unfrequently complains of pain in the fingers which he no longer possesses.* It is not in fact till experience has taught us that a distinct sensation belongs to each point of the body, that we refer to that part as the seat of the feeling. This view is further confirmed by what I heard stated by Sir Charles Bell, in his lectures at the College of Surgeons. The operation for what is termed hare-lip is sometimes performed on a very young child ; in this instance it is not necessary to confine the hands of the little sufferer, for although the pain occasioned is acute, not having yet learned to refer the sensation from the brain to the wounded part, he knows not where he is hurt, and therefore makes no effort to defend himself. Thus, while the face expresses great agony, the arms, as much uninstructed in their own power as the sufferer

* Müller, 746.

with regard to the seat of sensation, make no other movement than that occasioned by the involuntary convulsions of pain. Here, then, we have on the one hand instructed sensation rendered fruitless by the absence of the part to which it refers; on the other, the power of movement unserviceable because that sensation is as yet uninstructed. In the animal whose existence depends on the *instant* communication between the sensitive and motor nerves, and whose less complex brain allows it, we find no hesitation of this kind; the movement is instinctive: in man it is rational, and until reason knows where to locate the sensation, the movement is of the most limited kind.

14. Three distinct systems of nervous mechanism have already been noticed (par. 8.) as essential to the existence of the individual. The nerves belonging to them are spread over the whole body, for there is no portion of the living machine so minute as not to need blood vessels to nourish, sensations to give warning of danger, and power of movement to avoid it. In the second of these divisions we find a set of nerves subservient to yet higher purposes; these are what are

usually called the nerves of special sense, i. e. smell, taste, sight, and hearing. Every one knows that the nostrils, mouth, eyes, ears, are the organs through which the sensations are received, and most are aware that, unlike the nerves of touch, which are dispersed over the whole surface of the body, those of special sense are spread over a comparatively small space, and limited to their respective organs, which, by their situation on the skull, are placed in immediate communication with the brain. Each of these organs has its own nerve assigned to it, which receives and transmits the impressions belonging to that particular sense, and no other; for the sensations of touch or of pain are provided for by branches of other nerves. Every surgeon knows the fact that the needle of the operator produces only the perception of a flash of light when it touches the fibrils of the optic nerve, and that pain and sensibility to touch remain after the optic nerve itself has perished. The like may be observed of all the other nerves of especial sense. So far therefore is clear enough; but the *mode* of conveying impressions is more mysterious, and it is not improbable that we may never arrive at more than

a conjectural explanation of it. The optic nerve when observed with a powerful magnifier, appears to be formed of innumerable minute fibrils which pierce through the delicate membrane at the back of the eyeball, called the retina, and show themselves on its

PORTION OF THE OPTIC NERVE MAGNIFIED.

surface, for the most part in the form of small globules or papillæ easily detached, and which appear to close the ends of the hollow fibres. The auditory nerve has something of the same appearance, though the fibres are less minute than those of the optic nerve, and the points which show themselves on the membrane they penetrate, differ slightly from these in their form. It seems probable that both these nerves are destined to receive impressions from different undulatory movements, the one

conveying the sensation of light, the other of sound; and though it would be presumptuous to say that the modus operandi can be certainly or distinctly stated, yet a very simple illustration may perhaps give some notion of it to those who have not time to pursue the study further. When a hollow tube is filled with liquid, the slightest pressure at one end is instantly perceived at the other. If, then, as modern observers assert, the nerves be hollow fibres filled with a half fluid substance which may be seen issuing from them if divided, then it is easy to comprehend that the impression made at one end of the fibril may be conveyed through every fibril connected with it down to the extremest point of the motor nerves. What the difference of structure is, which makes this impression in the one instance convey colours, in another sounds, and, when propagated further, produces that irritation of the muscles which causes movement, has as yet eluded observation; but it is evident from the result, that some decided difference must exist. Time was indeed when "the nerves of the senses were looked upon as mere passive conductors, through which the impressions made by the properties of

bodies were supposed to be transmitted unchanged to the sensorium. More recently, physiologists have begun to analyse these opinions. If the nerves are mere passive conductors of the impressions of light, sonorous vibrations, and colours, how does it happen that the nerve which perceives is sensible to this kind of impression only, and to no others, while by another nerve odours are not perceived; that the nerve which is sensible to the matter of light or the luminous oscillations is insensible to the vibrations of sonorous bodies; that the auditory nerve is not sensible to light, nor the nerve of taste to odours; while, to the common sensitive nerve, the vibrations of bodies give the sensation, not of sound, but merely of tremours? These considerations have induced physiologists to ascribe to the individual nerves of the senses a special sensibility to certain impressions, by which they are supposed to be rendered conductors of certain qualities of bodies, and not of others.

"This last theory, of which ten or twenty years since no one doubted the correctness, on being subjected to a comparison with facts, was found unsatisfactory. For the same

stimulus, for example, electricity, may act simultaneously on all the organs of sense,—all are sensible to its action; but the nerve of each sense is affected in a different way, becomes the seat of a different sensation; in one, the sensation of light is produced; in another, that of sound; in a third, taste; while, in a fourth, pain and the sensation of a shock are felt. Mechanical irritation excites in one nerve a luminous spectrum; in another, a humming sound; in a third, pain. An increase of the stimulus of the blood causes in one organ spontaneous sensations of light; in another, sound; in a third, itching, pain, &c. A consideration of such facts could not but lead to the inference that the special susceptibility of nerves for certain impressions is not a satisfactory theory, and that the nerves of the senses are not mere passive conductors, but that each peculiar nerve of sense has special powers or qualities which the exciting causes merely render manifest."*

15. It has been noticed above, that the immediate vital functions are carried on by

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* Müller's Elements of Physiology, translated from the German by William Baly, M.D. Sec. iv. chap. 1.

the sympathetic system. In like manner, the nerves of special sense seem to be connected with the instinctive emotions. Any accurate observer of animals may soon convince himself of this. Without insisting on the complete exactness of the illustration just given of the mode in which these nerves convey the impressions they receive, it may at least afford a point of view from whence to contemplate the operations of instinct. An organ made, not only to receive, but to propagate a particular sensation, receives it; the shock is sent in a moment through the less complete, or, as in the case of the savage, the less exercised brain to the motor nerves, and movement ensues as a necessary consequence. According to Mayo, there is no evidence that animals exert any volition beyond this necessary contraction of the muscles consequent on received sensation. If so, the actions which we choose to call ferocious, crafty, cowardly, &c. among the brute creation, are wholly undeserving of this blame. They are feelings inseparable from perceptions conveyed by the organs of smell, sight, and hearing, and necessary to the sustenance and the safety of the creatures which possess them.

16. But the actions which the emotions consequent on these perceptions instigate, are, in many instances exactly such as intelligence would suggest. The young calf seeks the udder as soon as it is born, but it is evident that he is merely led thither by the sense of smell; for instead of at once reaching the spot, he pushes his nose awkwardly hither and thither, and it is only when his mouth is touched, and the nerves of another sense thus excited, that he begins to suck. The movements of a lamb following its mother, of a dog hunting its prey, of a bird building its nest, result in the same way from impressions on the nerves of sense. To these well known instances of instinctive action, I would add a very remarkable fact, which, not being so familiar or so easily explained, has been distrusted by many. The circumstance, however, is not only unquestionably true, but may be received as a necessary consequence of the principles we would establish. There is an old horse belonging to a printer in London, and employed by him to turn the mill that grinds the materials of his ink. During the six days of the week this animal may be observed going round and round in

one direction, straining against a resistance. Such is his work. Sunday is of course his day of rest. Now few would conjecture in what manner this animal sets about reposing himself. He may be seen in the printer's orchard, not standing still, or lying down, or ranging about, but moving in a circle, exactly as he is driven in his mill, the only difference of the movement being that it is in the opposite direction. An eminent zoologist has justly referred this strange practice of the old horse to the nerves; not of *special* but of *general* sensation. He suggests that greater relief would be afforded to muscles long exerted in one direction by employing them for awhile in the opposite direction, than would be derived from their being absolutely at rest. What then seems at first a deliberate though an unaccountable movement, is in fact nothing more than a spontaneous impulse resulting from uneasy weariness.

17. But although the animal actions we have mentioned, when their nature is considered, seem to be as intelligent as if human reason had instigated them, it may easily be proved that the sagacity from which they proceed is extremely limited in its extent.

For whenever any cause leads the animal to transgress those bounds, it is then seen at once how different reason is from instinct. Such is the case of a puppy when rubbing its nose on a brick floor to bury a bone; of a hen sitting on a stone instead of an egg: such likewise was the case with the beavers which Frederick Cuvier kept in a cage. These animals, on being supplied with materials, employed themselves in building that particular structure which, essential as it is to their existence when at large, and in their natural state, was then utterly without use or meaning.

The obvious conclusion from hence is, that whatever faculty the instinctive impulse elicits, is incapable of advancing beyond a certain point in this class of creatures, and is unserviceable for any other act of intelligence. "Cette pensée qui se considère elle-même, cette intelligence qui se voit et qui s'étudie, cette connaissance qui se connait, forment évidemment un ordre de phénomènes déterminés d'une nature tranchée, et auxquels nul animal ne saurait atteindre. C'est là, si l'on peut ainsi dire, le monde purement intellectuel, et ce monde n'appar-

tient qu' à l'homme. En un mot, les animaux sentent, connaissent, pensent; mais l'homme est le seul de tous les êtres créés à qui le pouvoir ait été donné de sentir qu'il sent, de connaître qu'il connaie, et de penser qu'il pense." *

18. But though the animal intelligence, with whatever labour it may be cultivated, be unfit for any speculative purpose, this defect is compensated for by its fitness for practical purposes without any previous exercise. The cause of this is the comparatively small compass of apparatus connecting sensation with action in the lower tribes; and as they are thus in great measure exempt from the painful apprehension of danger, and from perplexity at the time that it occurs, it is in their case decidedly beneficial. In man, the relations between the sensitive and motor fibres of the nerves issuing from his brain are liable to be confused with those of higher intelligence in consequence of the more complicated functions of that organ. This structure of his nervous system exposes him to

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* Résumé analytique des Observations de Frédéric Cuvier sur l'Instinct et l'Intelligence des Animaux. Par P. Flourens, p. 55.

inconvenience and hazard, which other animals are exempt from. The dizziness produced by looking down a precipice is known to every one; were we to try to cross a chasm on a narrow plank, our limbs would probably begin to tremble so violently, that the body, unable to retain its balance, would fall into the depths beneath, and yet we should walk steadily along the same board placed on the floor. This has sometimes been accounted for by assuming that the perception of an horizon by the eye is requisite to enable the limbs to maintain an erect attitude, or go on in steady progression. A philosophical friend has ingeniously, as I think, conjectured that little or no unsteadiness would be experienced in crossing a deep lake on a causeway no more than a foot wide, if the surface of the water were exactly level with this narrow path; but that if the lake could be emptied before we had passed over, and we were to find ourselves on the top of a wall forty or fifty feet high, we should be very apt to lose our balance and fall. In this case it is quite evident that our real condition would not be changed; but that the danger would arise entirely from the difference in the perception

received by the eye. It is important to observe that throughout the animal kingdom this timidity seems to increase with the degree of intelligence belonging to the creatures placed in such situations. Goats and ibexes stand at the edge of precipitous rocks, and gaze fearlessly on the depths beneath ; but the carnivorous animals, which are more intelligent* than the ruminating tribes, show considerable alarm when exposed to this danger, though on other occasions they are more courageous. Cats, for example, though accustomed to climb, are frightened and unsteady when put on the bough of a tree at any considerable height, and there can be little doubt that the instability of the human frame, under the circumstances described, is augmented by the disturbed state of the reasoning faculties arising from foreseeing the probability that our alarm will increase. I am also inclined to think that where the disturbance in the functions of the motor fibres is not caused by fear, it arises from the want of some near and steady object by looking at which we may adjust the body so as

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* Floureus.

to poise it duly. A distant horizon with no intermediate near object, such as it is in looking from a precipice, or a rapid current, does not afford this, and we falter; for in the given case of crossing a lake, on a narrow causeway, the slightest ripple on the surface would very soon prevent us from keeping our equilibrium. And this probably is one cause of reeling in drunkenness: the functions of the optic nerve are disturbed by the unwonted pressure of blood on the brain, and every thing appears to be in motion: accordingly, having nothing steady before him, the drunkard reels. The narrowest ledge on the side of a precipice may be crossed safely, by looking steadily at the rock beside us, instead of at the chasm below.

19. Before quitting this part of the subject, it will be well to observe that the fibrils which converge from every part of the body, from the trunks of the nerves, never in any instance unite with each other. Thus every one carries its report from the part which receives the impression, distinctly and separately to the brain; and, as the white substance of that organ, in whatever form it appears, is also composed of minute fibres sustained and

clothed by a most delicate membrane, so we have good reason to suppose that the sensation carried by the finest fibril from the remotest part of the body, is communicated to its own especial fibril in the brain, and through it duly transmitted to the corresponding motor fibre.

20. But another circumstance is here to be observed.* The sum of all the fibrils in the nerves does not by any means amount to the volume of the brain even in the lower order of animals; still less in man, in whom, though the volume of the brain be proportionally greater, the nerves are less: thus there must be many fibres destined to some other purpose than that of mere conductors of sensation. But it is likewise remarked that they have a flexiform arrangement; and thus the simple fibril of sensation, though not mixing with any other, may nevertheless, by its intercrossing, communicate whatever shock it may receive through a different series of nerves, and so give rise to those varieties of action which sometimes excite our surprise when we

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* On Fibres of Spinal Marrow and Sympathetic in Rana esculenta. Dr. A. W. Volkman, Brad. Med. Rev. Vol. vii. p. 541.

see them in the brute creation, because they seem to partake of the nature of reason. But if the reasoning faculties be, as I shall presently show, the mere function of an organ, then, in proportion as that organ is developed, its properties will also be developed, and it is at the option of the will which directs them to make those properties available or not to other and higher purposes than those relating to mere animal life. I have already noticed that we have no proof of any will in the *animal* beyond the mechanical one resulting from a shock transmitted through the nervous circle. Of the will of *man*, as it belongs to a second class of functions, I shall speak by and by.

21. It remains now that I prove from facts, as in the case of the sensitive and motor nerves, that a *certain part of the brain actually is the organ of thought*; and in order to make what follows more intelligible, I must beg your attention for a moment to a slight sketch of its figure. You will perceive that the whole upper part consists of two rounded masses forming two segments of a half-globe. These are usually termed the hemispheres of the brain. These are furrowed with deep convolutions, apparently intended to give a

1. Great transverse commissure. 2. Commissura mollis.
3. Anterior commissure.
4. Commencing fibres of the inferior longitudinal commissure or fornix.
5. Hemisphere of the brain. 6. Cerebellum.

larger extent to the gray or cortical substance; and at some distance below the surface various transverse and longitudinal bands unite them as it were into one acting whole. The under surface of the brain consists partly of the hemispherical surface, and partly of a collection of thin fibres which are distributed through the body as nerves of motion and sensation. If these tracts of nervous matter are injured, palsy of the limbs results.

22. A considerable analogy may be traced between the arrangement of the brain and

that of the organs of special sense. Thus as we have two eyes, two ears, two nostrils; so we have also two hemispheres of the brain, and we may remark as a consequence of this, that a serious injury, amounting nearly to the removal of one hemisphere, does not necessarily abolish the function of thought, any more than the loss of one eye or the failure of one ear produces absolute blindness or deafness. I have heard an instance of a young boy who was dashed on the ground by a fall from his horse, with such violence as to shiver one side of his skull, and a large quantity of the brain nearly amounting to the magnitude of one hemisphere actually issued from the wound. When this young gentleman had recovered, he was so far from manifesting any want of intellect, that he attained considerable proficiency in mathematics. This case runs parallel with that of persons who have gone on for a considerable time deriving their sight from one eye, and quite unconscious that they had not the use of the other.

23. When death supervenes from furious mania, it is usually found on examination that the cortical substance is in a state of inflammation if not of gangrene. In other

cases where loss of intellect instead of death has followed an attack of mania, it has been found on examination that a great alteration in the structure of the white substance had taken place, apparently the consequence of the violent preceding inflammation. There is a case recorded of a woman received into the hospital of La Salpetrière at Paris, who, after an attack of furious mania, gradually lost her memory entirely, and sunk at last into a state of utter imbecility. She died about seven years after her admission, and on examining the brain it was found that the convolutions of the hemispheres had entirely coalesced into an even surface, over which a very thin layer of gray matter was spread. The white medullary matter was changed from a soft substance into a strong elastic fibre, which admitted of being torn into long strips, and offered considerable resistance to the knife of the dissector. * Another case is recorded of a person possessing enough of recollection to be employed in trifling commissions, but idiotic in regard to connection of ideas; whose brain was found on exami-

* Müller's Elements of Physiology, p. 837.

nation to be without the great transverse band which unites the two hemispheres: and a third where, in an idiot girl who died at fifteen years of age, the two anterior lobes, the parts, namely, which form the front of the hemispheres, were entirely wanting.

24. It would not be difficult to multiply cases where either original imperfection or subsequent injury of the cerebral hemispheres has caused either idiocy or madness; but perhaps a more remarkable proof yet of the office of the brain may be found in the circumstance that *a slight degree of inflammation is attended by an extraordinary increase of the vividness of the ideas and the general powers of the mind. In two cases which have been mentioned to me, where I can have no doubt as to the fact, persons previously of rather weak intellect, during an access of what is called brain fever, suddenly acquired a mental force which abandoned them again on recovery; and a friend who has suffered more than once from transitory inflammation of this part, has assured me that during the severest paroxysms of pain, the gratification

* Solly on the Human Brain, p. 370.

at the immense power of mind thus acquired, almost counterbalanced the suffering.

25. Something of the same kind occurs under the stimulus of wine. A more than ordinary circulation of blood is promoted by it; the brain partakes of the excitement, and the imagination and the emotions are thus mechanically rendered more vivid; but when pushed to excess, the vessels become overloaded, and if carried a step further, apoplexy and death ensue. There is indeed no symptom of drunkenness which does not run parallel with those of diseased brain; from the exaltation of faculties in the early inflammatory stage, to the utter senselessness of the fatal termination.

26. With these facts before us, and the *hundreds of others that might be added to them, it would be difficult to avoid the conclusion that recollection and the power of combining ideas, or, what are usually termed the reasoning faculties, are as much a function of the hemispheres of the brain, as sight or hearing are of the optic or auditory nerves.

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* Müller, B. III. sec. v. p. 835. Fletcher, Part III. p. 100.

What the spring is which moves the machine, I shall consider presently; my first concern has been to show what the machine is. I am aware that I am here on the threshold of phrenology, but my path carries me past, not through the portal, and I forbear to enter.

27. We have now traced the machinery by means of which, man is a living, a sentient, and an intelligent animal. We will next proceed to investigate what may be called the elementary functions of intellectual man. In pursuing this inquiry we may derive considerable assistance from a Table to which I have already referred occasionally, when considering the nature and extent of animal instinct. It is, however, to the operations of human intelligence that the arrangements of this Table principally apply. These, as will be observed, are divided into two classes, distinguished by their causing or not causing bodily change, namely, any movement or sensation.

TABLE.

I. Functions sharing in or causing bodily change:

1. Appetites and functions appertaining to life	Sympathetic system
2. Instinctive emotions	Nerves of sense
3. Faculties	Hemispheres of the brain

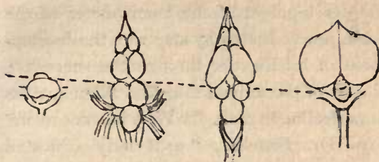
II. Functions neither sharing in nor causing bodily change:

1. Individual consciousness including the memory which this requires.
2. Intelligent will.

28. It cannot be disputed that a vital appetite, such as hunger, or that an instinctive emotion, such as fear or grief, or that the exertion of such faculties as those used in abstract reasoning, are attended with bodily change. Thus, an unsatisfied appetite causes uneasiness; or an instinctive emotion while the body is under its full influence, sometimes acts as an antagonist to appetite, as when grief subdues hunger by deranging the digestive powers. Sometimes the emotion interferes with the most delicate operations of the sympathetic system, as when fear or joy, which necessarily arise from an impression on some nerve of sense, affect the action of the heart through the medium of the connecting links between the spinal and sympathetic nerves; there is then a sensation as of a blow or compression of the chest: or when yawning tells of the general weariness of mind and body. Here a particular nerve acts on the diaphragm, the respiratory muscles are tuned in accordance with this by other nervous fibres con-

nected with it at its origin, and the impulse is propagated through the whole of these muscles, till that odd movement of the lower jaw is produced, which is so uncomfortable to the listener, and so discouraging to the orator.

29. On the other hand, whoever has elaborated any process requiring severe thought, is experimentally acquainted with the headache, or the bodily fatigue that results from the prolonged labour of the mind, although the limbs that experience these sensations have been in a state of absolute repose. I have shown that the construction of the brain and nerves only accounts for this. If we admit that the gray matter of the hemispheres, vitalized as it is beyond any part of the body by the current of blood that keeps flowing through all its particles with unwonted activity, be the seat of intelligence: if we admit, too, that this metropolitan organ of the body is in constant communication with every other part, it will cease to surprise you that any excitement of this central portion should produce perceptible vibrations through all the nerves, whether of the sympathetic, the spinal, or the cerebral systems.



30. It is remarked* by physiologists that

* Owen on Structure of the Brain in marsupial Animals, Ph. Tran. 1834, p. 358—1837, p. 89.

the development of the hemispheres of the brain proceeds step by step with the development of intelligence through the successive classes of the animal kingdom till it arrives at perfection in man. *"Who has not seen," says Dr. Fletcher, "artificially educated horses, dogs, lions, pigs, elephants, bears, monkeys, canary birds, and even hens; but who has ever seen, or ever will see, an educated worm or oyster? The educability of animals then, or in other words their intellect, is in proportion to the size and composition of their brains." Thus, of all animals, man, who has the largest and most complicated brain is the most improveable; he can judge, compare, discriminate, and remember all the impressions made on his senses with far more precision than any other of the mammalia. This was to be expected from the structure of his brain, which differs in many points from all others; but here a most important fact presents itself. With the development of the brain in the animal, proceeds also its intelligence; but the individuals of each class retain a close resem-

* Physiology, Part III. p. 89.

blance to their common type: the greatest difference that can be produced by education between the wild and the domesticated animal is so small as scarcely to be worth the notice; since it consists in little else than a sensation of fear impressed by the felt power of man: but when we look at the human race, so great is the difference between civilized and uncivilized man, that some physiologists have endeavoured to find in the brain of the latter a resemblance to the quadrumana rather than to his more cultivated brethren. Yet there is no perceivable distinction in the cerebral organs of individuals constituting the most clearly defined varieties of the human race: whether civilized or uncivilized, male or female, we find the same component parts, the same relative proportion of brain. Whence then the immense difference between the negro in his African wilds, and the European philosopher?

31. I think some of the points I have endeavoured to establish will in great measure explain this. Every bodily fibre acquires strength by exercise: none need be told how much muscular power is acquired by a constant and moderate exertion: the practised

eye will see, the practised ear, hear, what these organs when unpractised distinguish with difficulty: it is not wonderful then, if the practised brain can also carry on its functions with greater facility and increased power. In savage life, where subsistence is hardly obtained, and where danger is always at a point that keeps the emotions which guard existence in constant exercise, men who have to struggle for their daily food, and defend themselves from their no less daily perils, require from the brain but a very small part of what it *can* accomplish: their greatest stretch of reasoning extends not beyond the connecting a bent twig, or a down-trodden leaf, with the steps of their prey or their enemy. In such instances, we may easily conceive that the unexercised faculties become as powerless as the limb of an animal which from the moment of birth had been restrained from movement. A child who had grown up with a limb so disabled, would not be aware of its use unless he saw it exemplified in others, and even if he saw its use, he would still find that in his own case the effort to make it available would be perfectly vain.

32. Such I conceive to be the state of the

brain which has never been called to exercise the higher faculties. The instinctive emotions are propagated through it with the almost delirious violence which characterizes the brute creation, because the fibres destined to carry on the higher reasoning functions have remained inert till they have become powerless, and man is thus assimilated to the lower tribes, not because the organ of thought is wanting, but because it has not been exercised. Christophe, the negro ruler of Haiti, was probably not removed above a generation or two from the African savage, yet his daughters were polished and accomplished women, fit to take their place in European society. A better proof could hardly be given of the improveability of all the races of men by education, even in *one* generation.

33. I cannot pass over this part of the subject without drawing from it one useful lesson upon the necessity of cultivating the higher faculties far more than is yet done, even among races calling themselves civilized. If the instincts, or as some will call them, *passions,* assume so undue an ascendancy in consequence of the inertness of the antagonist part of the brain, that man's whole moral

nature falls into the morbid state of a convulsed, or finally, a contracted limb, it is then no light crime in those who have the government of a family, or a society of human beings, if they suffer the young to grow up without duly developing the full powers of a nature so admirable where its mental growth is duly proportioned, so tremendously capable of evil when it is not.

34. A man is not to be considered as educated because some years of his life have been spent in acquiring a certain proficiency in the language, history, and geography of Greece and Rome and their colonies, or in bestowing a transitory attention on the principles of mathematics and natural philosophy: nor is a woman to be considered as educated because she can execute a difficult piece of music in a brilliant style, or speak French, German, or Italian with fluency. Such attainments require little more than mere mechanical recollection, the lowest of all the cerebral faculties, or the rapid transmission of an impulse from the sensitive optic nerve to the motor ones of the arms and fingers, which is nothing better than the instinctive movement of the animal: neither can the storing up the opinions of

others, or the accustoming the tongue to the idioms of other languages, be properly termed an act of thought: for in such cases the capacity of combining ideas, of weighing and judging ere a course of action is adopted, remains even less exercised than in those who, though they are turned into the world with the mind as it were a *tabula rasa* to receive any impression, and too frequently a bad one, yet amid the difficulties and sufferings of poverty, sometimes learn to think. It is from the depths of man's interior life that he must draw what separates him from the brute, and hallows his animal existence; and learning is no farther valuable than as it gives a quantity of raw material to be separated and worked up in the intellectual laboratory, till it comes forth as new in form and as increased in value, as the porcelain vase which entered the manufactory in the shape of metallic salts, clay, and sand.

35. I have before alluded to the notion of some physiologists that the negro formed but the connecting link between the baboon and man.* This has been so fully refuted by Pro-

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* Phil. Trans. 1838.

fessors * Tiedemann and Owen,* that it is needless to go into it at length; but I mention it here to give a further instance of the necessity of cultivating the mind, even to give the bodily frame its due development, and the duty, therefore, which even political economists must acknowledge, of bestowing on all the power of doing so. Dr. Prichard, in his Researches into the physical history of mankind, quotes a fearful instance drawn from the early history of Ireland, of the deterioration consequent on such a degree of poverty and suffering as reduces man to a merely instinctive existence.

36. "On the plantation of Ulster," says the writer, "and afterwards on the successes of the British against the rebels of 1641 and 1689, great multitudes of the native Irish were driven from Armagh and the south of Down, into the mountainous tract extending from the barony of Flews eastward to the sea: on the other side of the kingdom the same race were expelled into Leitrim, Sligo, and Mayo. Here they have been almost ever since exposed to the worst effects of hunger and ignorance, the

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* Trans. Zoo. Soc. Vol. i.

two great brutalizers of the human race. The descendants of these exiles are now distinguished physically from their kindred in Meath and in other districts where they are not in a state of physical degradation. They are remarkable for *open projecting mouths,* with prominent teeth and exposed gums. Their advancing cheek bones and depressed noses bear barbarism in their very front. In Sligo and the northern Mayo, the consequences of two centuries of degradation and hardship exhibit themselves in the whole physical condition of the people, affecting not only the features, but the frame, and giving such an example of human deterioration from known causes, as almost compensates by its value to future ages, for the suffering and debasement which past generations have endured in perfecting the appalling lesson. Five feet two inches on an average, pot bellied, bow legged, abortively featured, these spectres of a people that were once well grown, able bodied, and comely, stalk abroad into the daylight of civilization, the animal apparitions of Irish ugliness and Irish want. In other parts of the island, where the population has never undergone the influence of the same causes

of physical degradation, it is well known that the same race furnish the most perfect specimens of human beauty and vigour both mental and bodily."

37. If such be the effect under our own eyes of reducing man to the lowest point at which he can maintain even a mere animal existence, we may well believe that ages of such a state may have stamped many of the characters of the brute creation on the human countenance in the wilds of Africa. The great difference between the skull of the negro and the European consists in the wide opening for the nose, which by its greater spread affords more room for the development of the olfactory nerve: and we may add to this, the form of the jaw again approximating to the animal in its projection, though not in its other characters. We may probably read in these peculiarities the history of generation after generation doomed to a merely instinctive existence, as well as we read sensual indulgence in the thick, moist, swelled lips which so frequently characterize those who give themselves up to such a course of life.

38. It is almost needless to observe, after

what I have already said, that it is to the surplusage of fibres in the brain over and above the quantity requisite for the transmission of sensation to the appropriate motor fibre, that we must trace not only the power of reasoning, but all the finer flights of imagination and wit. The agent of which I shall now presently have to speak, appears able at will to reproduce the impressions once received through the medium of the nerves of sense, and it is amid the novel combinations of the fibres thus called into action, that all those wonders of thought are produced which have won our admiration through all ages. That such is their origin may be proved by the fact, that the most brilliant imagination never yet produced anything which had not been seen, heard, or felt, as it were piecemeal: the combination is new, but the material thus woven afresh is what all are acquainted with.

II.

39. WE have now traced the human animal through all parts of his structure: we have shown first a system of ganglia and nerves springing from them, by means

of which organic life is carried on, and appetites excited for its maintenance: we have further seen a set of nerves whose terminations are to be found at the base of the brain, which supply the senses by which man communicates with the external world: we have seen another apparatus within the cranium by which these sensations are weighed and examined, and the result of this examination transmitted finally to the motor nerves for execution; altogether forming the most perfect piece of machinery ever constructed: for these nice operations of thought are the work of fibres and fluids contained in them, merely set in motion by the impression made at one part, and thus transmitted through the whole series. Let us now consider the actions of this animal.

40. The first instinctive impulse is to preserve life. Look at a wrecked vessel! There is one man there ordering and directing all on board: the only remaining boat is lowered; he is careful to see it filled with the persons crowded about him,—it pushes off, and where is he? He is there on the deck of that sinking ship; the boat would not hold *all*, and he has refused a place in it, and remained to perish

rather than sacrifice one life committed to his charge. He knows that death awaits him: he has been urged to save himself, and yet he is there! What is the impulse which prompts him thus to contravene the first great law of animated nature?

41. Sleep again is among our most imperious needs, for the want of it gradually destroys life. There lies a sick man in his bed, senseless,—in the last stage of an infectious fever: and there is one watching beside him, looking pale and exhausted, but who sleeps not, stirs not, though her young life is wasting away with fatigue, and exposed to contagion: and she knows it, and has calculated that the same grave will receive both! What nerve of all that fine machinery has impelled her to this course?

42. Look at the Astronomer in his observatory! The night is far advanced, and he is chilled and fatigued; yet he remains with his eye at the telescope—for what? To carry on a series of observations which perhaps in two generations more may give as its result the knowledge of some great law of the material universe: but he will be in his grave long ere he can expect that it will be ascertained.

He sits down to his calculations, and he forgets his meals, sees nothing, hears nothing, till his problem is solved! No sense prompts him to this sacrifice of rest and comfort. But do we call these persons insane? No—we honour them as the excellent of the earth: admire their lives, and wish that when the occasion comes, we may have courage so to die.

43. I know but of one solution of the difficulty; there must be some element in man which we have not yet taken account of; some untiring, undying energy which eludes indeed the fingers and the microscope of the anatomist, but which exercises a despotic sway over the animal mechanism, and takes possession of it for its own use, to the point of exhausting and finally destroying it. Nor is it any objection to this view, that there may be instances either of congenital idiocy or subsequent injury of the brain where this power is less manifested, for we are not wont to judge of the peculiar characters of a species from the anomalous exceptions. The power which overmasters and despises sense is yet obliged to convey its mandates through bodily organs; take these from it either wholly

or in part, and it can no longer manifest its existence in the same way as when these organs were perfect. The paralytic man would move his arm or would express his wishes if his arm or his tongue would obey him; and his frequent impatience at their incapacity sufficiently shows that the ruling will and the servant faculties are of a different and distinct nature: nay, it has been observed that even the insane are at times conscious of and lament a state of brain, which no longer enables the individual to act rationally. This could not occur, were the brain and nerves as acted upon by external stimuli, the only spring of man's will; for then the altered structure would invariably produce a satisfied acquiescence in its results.

44. It will easily be seen that if we acknowledge a distinct acting principle in the above cases, we cannot in any other involve it in the accidents of the body: in sleep it voluntarily abandons the senses to the repose they need, and resumes the use of them when it chooses, for who does not recollect how, when the weary body required repose, he has *forbidden* thought, in order to allow the senses to fall into the state of torpor necessary

to recruit their vigour? And there are few, probably, who have not also experienced how easily sleep, which would otherwise have lasted for a much longer period, may be curtailed by the resolution to awake at a particular hour. In death,—whatever be the cause that exhausts the muscular irritability so far as to make it no longer sensible to the usual stimuli, the cessation of that living action at once stops the machine. It is in vain that the musician touches the keys, if the strings be broken; but we do not thence argue that the musician has ceased to exist; nor have we more reason to conclude that the principle which claimed the powers of the living body for its own use, has ceased to exist, because the instrument it required to make its presence apparent is out of order or destroyed.

45. The philosopher, when he sees an effect produced, seeks for the cause: the chemist, if he finds two apparently similar substances which under the same test exhibit different phenomena, thinks *that* a sufficient cause for considering them different in nature, and gives them separate names. If, then, effects occur in man which are not sufficiently ac-

counted for by any known bodily organism or impulse—if under the same circumstances he acts as no other animal would act, we must either on this occasion throw aside all our usual modes of reasoning, or we must pronounce that man differs essentially from all other animals, and has a cause of action not to be sought for in nerves and muscles. That cause may be invisible; so is the wind: imponderable; so is electricity: intangible; so is light, if the one organ fitted to receive it be disabled: it is therefore no new thing to find an existing agency of potent efficacy which as far as regards our senses is invisible, imponderable, and intangible. What we call it, matters not; it is evidently superior to, and master of the body: it has other objects in view, other pleasures, other hopes; and to attain these it compels its slave to undergo privations, pain, and death.

46. I have already referred to the table where the phenomena of man's nature are reduced to two classes: those whose exercise either causes, or is attended by, bodily change, i. e. emotion, fatigue, or painful exhaustion—and those, which though incessantly manifested, produce no sense of weariness what-

ever. It is certainly among the last of these that we must look for this unknown and potent cause: accordingly we find, that the two unchanging functions noted in this table are exactly those which would give rise to such actions of the human animal, as I have described. These functions or attributes are, a consciousness of individuality independent of the bodily frame, which talks of the limbs and the faculties as *its property,* not *itself;* and an intelligent and indomitable will, forming an essential attribute of that individual existence. It is this persevering and remembered will, acting frequently in opposition to the animal nature, which it is my object to claim as the distinguishing characteristic of man; as the manifestation of another nature, differing in attributes from and superior in energy to the mere bundle of muscles, nerves, and blood vessels which we see before us, and which it rules so despotically. A moment's reflection will show us, that the memory inseparable from the exertion of this individual and intelligent will, is perfectly distinct from that faculty of common recollection with which it may at first be confounded. This latter, like all the other faculties of *the brain,*

has its infancy, its maturity, and its decline; is strengthened by exercise, impaired by disease, enfeebled by entire repose; but the memory necessary to individual consciousness and will, is perfectly insusceptible of fatigue, increase, or diminution; and when palsy or age has taken away the recollection of persons, of events, and of words even, the memory of individuality requisite to the exertion of will remains as strong as ever; and the impatience usually attendant on such a state is perhaps one of the strongest proofs, that the organs are the servants, not the cause, of the intelligent will.

47. We have already seen how far the volition which is the result of a shock sent through the nervous circle can go: it amounts to little more than a blind instinct, for the animals which possess this apparatus in common with man, are incapable of education beyond a certain point, and that education is only to be effected by the fear of pain or expectation of food. The poverty of language is always a great hinderance in philosophical researches, and here it is particularly felt; for we have but one word to express this instinctive will of the animal, and that lofty

prerogative of man which defies the influence of sense, despises the small globe it inhabits, roams over space to find objects great enough for its contemplations; and amid worlds upon worlds which multiply on our view as art prolongs it, still feels dissatisfied, and requires nothing less than infinity for its contemplation—immortality for itself.

48. If we look through nature, we shall find that the happiness of the organized being consists in the accomplishment of its end of existence. Animals while supplied with food, and propagating their kind, are happy: their span of life is long enough for all the enjoyments they require: but man's life is insufficient for his wishes, and these gross pleasures disgust and weary him. Where is *his* happiness then? We have seen it! The captain of the wrecked vessel feels his heart swell with proud delight as he awaits death with a consciousness of having done what, if he were an animal only, would be an act of the wildest insanity. The fair girl, before whom all the pleasures of life were smiling, despises them, and finds her joy in dying with the object of her affections, because she *feels*, even if she does not argue, that thus

they will still be united. The astronomer has no greater delight than to pursue knowledge which affords him neither fame nor profit; though it be only to be gained at the expense of fatigue at any rate, and probably of health.

49. These are the pleasures of a being whose nature has other ends than that of merely spending seventy years in eating, drinking, and sleeping, in the pleasantest way, and leaving other beings so to eat, drink, sleep, and—die! Nor is it merely a few that thus feel: the consciousness of a higher destiny is so rooted in man, that even the savage brands *him* with disgrace who seeks to preserve life at the expense of what he may deem honour, and the name of a coward is the worst of reproaches. There is scarcely any cause so slight that man will not risk his life for it: can we then with any common show of reason assert that sensation alone is *his* source of action? That risk of life brings no pleasure unless it be a mental one: he rises in his own esteem by so doing, and, it may be, in the esteem of others; but he does so only because, by despising base life, he has made good his claim to a higher nature.

50. We have asked, what is man's destin-

ation? I reply from these facts—immortality. We have asked what is the ultimate object of his existence? I am not here allowed to enter on the higher ground which would make the chain of reasoning complete; but if we allow that this rare piece of mechanism is not created by the cause that impels it; and no *man* has yet succeeded in imitating the smallest portion of organized matter; then a higher Intellect must have produced it, and I can hardly be wrong in assuming that the Intelligence which planned such a scheme of being, planned it not in vain; and that man is not the sport of circumstance, filled by his very nature with evil desires which it is his business to uproot: but that the Invisible Essence, which we have found so decidedly manifesting its existence in the midst of its bodily trammels, is placed in such a situation as to be improved, not deteriorated by, the companionship. He cannot alter the function of one fibre of a nerve even; it would be tyranny were he called upon to do so; but he can regulate and balance their action, and find those very functions which he can never alter, those very propensities which he can never subdue, because they are requisite to

his existence as an animal,—sources of enjoyment and of virtue.

51. I am forbidden here to enter on the nature of the only other Intelligent Will which we have any cognizance of, but this much I may be allowed to say,—that like natures must have like enjoyments. We have seen that all animated nature seeks the end of its being, and is happy in attaining it: if man then be akin to that Ruling Will which both he and the universe own as Lord, the ultimate object of his existence must be a like happiness, and we can figure none to ourselves for such a being but pure benevolence and perfect knowledge. Let me here be allowed to borrow the words of a philosophical writer to whom I am already indebted for many of the views I have this evening propounded: I can hardly give a better summary of the practical results of the whole system. "Thus," says the writer, "we see two kinds of animal functions mutually balancing each other, uniting to school the individual will to all that is amiable and exalted; the instinctive emotions softening the sternness of the faculties; the faculties curbing the animal force of the emotions:

and the will, impelled by the solicitations of the one, and guided by the information and caution of the other, acquiring by degrees those habits of judging and feeling rightly which qualify man for the spiritual felicity of his Creator. He has learned the enjoyment of benevolence and the excellence of knowledge, and his heaven is already begun on this side the tomb; and thus, though these emotions and these faculties may cease with the bodily mechanism which causes them, they have stamped their impress on the individual. Like metal poured from a furnace into a mould, which retains for ever the form so acquired, though the mould be but of earth; the soul has acquired the character it will carry with it into eternity, though the mould in which it was cast be returned to its dust."—*Philosophical Theories and Experience*, p. 74.

THE END.

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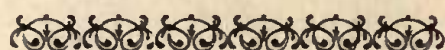

ON MAN'S POWER OVER HIMSELF TO PREVENT OR CONTROL INSANITY.

COMMUNICATED TO THE MEMBERS AT THE ROYAL INSTITUTION OF GREAT BRITAIN, ON FRIDAY EVENING, MAY 26TH, 1843.

BY THE REV. JOHN BARLOW, M.A.

OF TRINITY COLLEGE, CAMBRIDGE.

SECRETARY OF THE ROYAL INSTITUTION OF GREAT BRITAIN, F.R.S. ETC.

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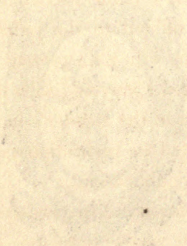


ADVERTISEMENT.

THE history of this little book is identical with that of "The Connection between Physiology and Intellectual Philosophy," which I published last year.

Each of these volumes contains the substance of a communication made to the Members of the Royal Institution, at one of their Friday evening Meetings.

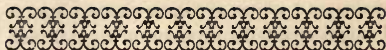
Both are offered to the public at the desire of many who were present on those occasions; and I may add with respect to the work now in the Reader's hands, that the President of the Institution was pleased to require its publication.

Both this book and its predecessor owe not only their origin, but large contributions of material, and great assistance in their composition and arrangement, to a Society of intimate friends with whom I

have the honour to be connected. Both may therefore be regarded as the effects of a confederacy whose object, as already declared (vid. Advertisement to "Connection, &c." p. vi.) is "to bring philosophy into a form that might benefit the mass of mankind, instead of being the mere luxury of a few learned men."

For whatever success may have attended the former publication, I cannot but be much indebted to the favourable judgment pronounced upon it by the most eminent physiologists of this country, to whom I desire to express, on behalf of those with whom I am allied, as well as on my own, our sense of the encouragement afforded by them to our enterprise.

Henrietta Street, Cavendish Square,
London, June 19, 1843.



ON MAN'S POWER OVER HIMSELF TO PREVENT OR CONTROL INSANITY.

I.

1. TWO years ago, I had the honour of submitting to you some views with regard to intellectual science, which appeared necessarily to result from recent discoveries in anatomy.—Now it is the property of all scientific views if true, that they announce a few simple principles which admit of an extensive practical application; and I endeavoured to apply this test to the theory I then brought forward as to the dual nature of man. I asked myself how it bore on that most terrible of all diseases connected with the brain—madness; and I found that wise and good men, even without thinking of the theory, had practically applied it in the treatment of maniacs; whose intelligent will they had roused to a certain degree of self-control by a system of kind and rational treatment, instead of the

chains and whips of former times. Still, if I might credit the assertion of a gentleman whose experience gives him a claim to attention, Dr. Thomas Mayo, though facts were accumulated, an hypothesis, which should give these facts the character of results from great principles, was wanting:—and I asked myself further, if a theory, which coincided with the views of so many men illustrious in science, might not have enough of the characters of truth to supply the desideratum which Dr. Mayo points out.

2. In order to make myself clearly understood, it will be necessary to take a brief view of the structure and functions of the brain and nerves as explained in my former communication. This apparatus consists of exceedingly minute hollow filaments, filled with a semi-fluid substance. These filaments are either compressed into a mass, as is the case in the brain and those brainlike structures called ganglia—or else extend from the brain down the back, as *spinal marrow;* and from thence they are distributed to the remotest parts of the body in the form of *nerves:* some employed in carrying intelligence to the brain, others in executing its mandates.

3. The vital functions, which go on unconsciously and unceasingly, are regulated by a peculiar set of nerves, extensively, though indirectly connected with the brain and spine. They are united into a separate system by means of numerous ganglia; and in colour and texture they bear the same resemblance to the gray matter of the brain and spine, that the spinal nerves and those of especial sense do to the white matter: though even in these ganglionic nerves, as they are called, white filaments are perceivable, derived from the spinal marrow. These will account for the influence exercised over the vital functions by the disturbing force which we shall presently have to notice, as well as by any sudden shock to the brain or spine. The circulation of the blood is under the immediate charge of the ganglionic nerves, one of which accompanies every blood vessel. The nerves of smell, sight, hearing, and taste, are derived immediately from the brain, as are those which regulate the movements of the face, and some of the upper portions of the body. The nerves of touch for the most part communicate with the brain through the spinal marrow, as do the larger portion of the motor

nerves also:—nevertheless much of the movement which ensues on the excitement of the nerves of sensation, is effected without the intervention of consciousness, as is seen in palsy, where movements are caused by touch, though the patient is unconscious of it. In the lower orders of animals, where the brain is almost, or wholly wanting, the movements seem also to be mechanically propagated from one set of nerves to the other.

4. In the human species a portion of the brain, which begins to develope itself in the higher order of animals, assumes a preponderance over the rest. I mean the hemispheres—which fill the upper part of the skull. Less immediately connected with the nerves of sense, this part has its own peculiar function: and I formerly brought examples to prove that this function is that of thought.* I then took occasion to notice a peculiar force found in man, which is capable of assuming a control over this portion of the brain; and, through it, over the greater part of the bodily functions—a force whose agency, as Professor Leibig has well observed, is " entirely distinct

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* Vide No. II. of Small Books on Great Subjects.

from the vital force, with which it has nothing in common,"* but in so far as it is viewed in connection with matter, manifests itself as an acceleration, a retarding, or a disturbance of the "processes of life." We find therefore, as this acute observer goes on to state, "two forces in activity together, namely the mechanical-vital force—or, as he terms it, *vegetative life*, and the source of the higher phænomena of mental existence, which is of a perfectly distinct, and so far a superior nature, that it is able sometimes to exercise a dominion over the vital force which nullifies its action, and at all times controls and modifies it.

5. In my former communication, I called your attention to a Table † arranged so as to exhibit the functions of these two forces, whose existence it was my purpose to establish. I hardly then anticipated that I should find my views supported by such men as M. Jouffroy in France, and Professor Liebig in Germany, but such being the case, I feel the less diffidence now in bringing forward a

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* Leibig's Animal Chemistry, p. 5.

† Small Books, &c. No. II. p. 38.

theory, where, if I err, I err in such good company.

6. In the two great divisions of this Table, I have placed side by side the two great forces which manifest themselves in the phænomena of man's nature. The VITAL FORCE by virtue of which he is an animal—and the INTELLECTUAL FORCE by virtue of which he is something more. Throughout nature we find the advance to a higher grade of being, made by addition rather than by change. The power of assimilation is added to chemical affinity, and we have organized life as in vegetables; but set in motion by external causes: nervous matter is added in the animal; and vegetative life proceeds still unconsciously, but by means of a main-spring within the body; and this lowest kind of life is found, as I formerly observed, in the rooted zoophyte no less than in man. It forms the first subdivision of the Table. Nerves of sensation and of movement are added, and the animal becomes locomotive, and is impelled by a feeling of pain or of pleasure to the acts needful for the maintenance of vegetative life: and this state of being is marked in the second division. Then the hemispheres of the brain are developed in

addition, as in the class mammalia, and the animal seeks its object by contrivance and by suiting the means to the end. Finally, as in the great step from in-organized to organized matter, a fresh *force* is added, not superseding, but availing itself of the other; and man steps forth a denizen of two worlds, and capable of an advance which we can set no limit to.

7. Such is the constitution of man. When in healthy action, we cannot easily figure to ourselves anything better calculated to produce the most admirable results than the reciprocal influence of the different parts and forces of this complex being: but in proportion to the variety of parts is the danger of derangement: and our business to-night is not to consider man in his normal, but in his abnormal state. I shall therefore now endeavour to apply the theory, which I have just given a brief abstract of, to practical use, first by giving a classification of the different kinds of mental derangement, and next by considering how far the immense power of the Intellectual force can in any case be applied to their prevention or cure. I prefer the term *mental derangement* to that of *Insanity*, because it will embrace all departures from the normal condition of man,

as far as the functions of the brain are concerned: and I conceive (herein following the great authority of Dr. Conolly *) that a certain degree of mental derangement may exist without constituting insanity in the usual sense of that word.

8. I propose to classify mental derangement thus:

I. Morbid affections of the nervous system and brain.

1. Morbid affection of brain caused by derangement of the sympathetic system, as inflammation, &c.
2. Morbid affection of the nervous system producing delusions as to sight, sounds, &c.
3. Morbid affections of the hemispheres of the brain producing loss of memory, &c.

II. Morbid affections of the Intellectual force.

1. *Inefficiency,* where either the appetites or instinctive emotions, &c. are left wholly uncontrolled.

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* Vide An Enquiry concerning the Indications of Insanity. By John Conolly, M. D.

2. *Misdirection,* where delusions of sense are reasoned and acted upon.

3. *Occullation,* where the organs of thought are impaired or wanting.

9. It will be readily seen that a force which is capable of acting as an acceleration, a retarding, or a disturbance of the vital functions, must have no small influence over so delicate an organ as the brain; and accordingly we find paralysis, inflammation, or brain fever, and a variety of other diseases of this kind, produced in many instances by causes purely mental—I need hardly give cases; they will occur readily to the recollection of every one.— Now a force which can produce disease, must have some power also in removing or preventing it; and my business to-night will be to endeavour at least, to mark out how far this force can be made available to so desirable an object. In this attempt to establish true principles where they are so much needed, I have had large assistance. To Dr. Conolly, Dr. Webster, and Mr. Samuel Solly, I must beg thus publicly to tender my cordial thanks; as well as to many others who have aided my views in various ways: indeed I can claim no merit to myself but that of an earnest desire

to fulfil my part of the great duty which every human being is sent into the world to perform; and in which, if we knew "what belonged to our peace," we should find our happiness too. It is not in the pursuit of fame or of profit that a man finds his noblest employment, though these may advance to meet him in his unshrinking career: it is in the being, as it were, the vice-gerent of the Deity on earth, and spreading peace and comfort around him, that he carries out the intentions of his Creator: and I know of none who have fulfilled that great mission better than some of those I have alluded to. Though in many instances struggling against prejudice and neglect, they have nearly carried their point, and rescued a large portion of their fellow creatures from a state of the most hopeless misery.

10. But to return—I have said that mental derangement and madness are different things: —thus a person may fancy he sees others around him who have no existence, as in the well-known cases of Nicholai of Berlin and Dr. Bostock.* This is a certain degree of

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* Vide Appendix A.

mental derangement while it lasts; but as both soon satisfied themselves that these personages were merely the creation of a morbid physical state, they were not mad. A man of less resolution would have shrunk from the labour of convincing himself that he was fooled by his senses, and would have insisted that the figures were real, and then he would have been mad. On these cases Dr. Conolly very justly remarks—"Let any one reflect how Nicholai preserved his reason under such visionary and auditory delusions for so many months; and why the English physiologist, though visited with the images which are so well known to be familiar with mad people, never lost the use of his excellent understanding. The ready answer will be 'they never believed in their real existence.' But why did they not? and why does the madman believe in their real existence? The evidence of both is the same—the plain evidence of sense. The explanation must be this. The Printer of Berlin and the Physician in London retained the power of comparison: they compared the visual objects of delusion with the impressions of other senses," and the perceptions of other persons, and became convinced of their

unreality. "This is exactly what madmen cannot do. One form of madness consists in this very illusion of sense, but it is conjoined with the loss or defect of the comparing power, and the madman concludes that what is only an illusion is a reality. But the illusion is not the madness." Thus, according to the opinion of this very able judge, the affection of the brain which causes these delusions, *is not* madness, but *the want of power or resolution to examine them, is.** Nothing then but an extent of disease which destroys at once all possibility of reasoning, by annihilating, or entirely changing the structure of the organ, can make a man necessarily mad. In all other cases, the being sane or otherwise, notwithstanding considerable disease of brain, depends on the individual himself. He who has given a proper direction to the intellectual force, and thus obtained an early command over the bodily organ by habituating it to processes of calm reasoning, remains sane amid all the vagaries of sense; while he who has been the slave, rather than the master of his animal nature, listens to its dictates with-

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* Vide Appendix B.

out question even when distorted by disease, —and is mad. A fearful result of an uncultivated childhood!

11. If I am right in what I have advanced, a man may labour under a mental delusion, and yet be a responsible agent: and if sanity or insanity be in a great many instances the consequences of a greater or less resolution in exerting the power of reasoning still possessed, the same kind of motives which influence a man in common life, are still available, though they may require to be somewhat heightened. It is on this principle that the treatment of lunatics has been generally conducted. Fear, one of the lowest, but also one of the most general of instinctive emotions, has been called in to balance the delusions of sense,* and, excepting in cases where the structural disease is so extensive as to deprive the man of all power of connecting cause and effect, it has been found sufficient to curb violence, and enforce a certain degree of peaceable demeanour towards the attendants. And in this the insane person differs not from the cultivated man who is left at liberty, whose

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* Vide Appendix C.

self-control rarely amounts to more than the avoiding actions which would have unpleasant consequences to himself. Suppose an irascible man, incensed by a false report; which, however, he believes to be true; he seeks his supposed enemy, and horsewhips or knocks him down: he does not assassinate, because he fears for his own life if he does; for it is clear that no feeling of duty has held his hand, or he would not have transgressed the laws both of God and man by thus revenging himself.

The madman has the false report from his own senses; wherein do the two differ? Neither has employed means within his power to ascertain the truth, and both are aware that such vengeance is forbidden. I can see no distinction between them, save that the delusion of sense has, as a chemist would say, decomposed the character, and shown how much of the individual's previous conduct was rational, and how much the result of mere animal instinct. It would be well for the world if the soi-disant sane were sometimes to ask themselves how far their sanity would bear this test; and endeavour to acquire that rational self-command which nothing but the last extremity of cerebral disease could unseat.

We do not descend from our high rank with impunity ;—and as, when matter has become organized, if the process of change, occasioned by the vital force, be impeded or arrested, the plant pines away and perishes :—as, after the organs of locomotion have been superadded, the animal debarred from the use of them, languishes and becomes diseased ; so man, if he give not full scope to the intellectual force, becomes subject to evils greater than animals ever know, because his nature is of a higher order.

12. In the classification which I have just given of the various kinds of mental derangement, I have endeavoured to make that distinction between structural and functional disease which I consider the first step towards understanding the nature of insanity. Every anatomist knows, that extensive structural disease can exist without producing irrationality. Paralytic patients, though the disease has its origin in the brain, may lose memory, speech, sensation, or any other faculty, and yet use the rest calmly and rationally: inflammation may cause pain and irritation, which will produce frenzy without impairing the rational will—for I have known an in-

stance where the patient, feeling that the brain was escaping from her control, gave her hands to be held by the attendants, that she might do no mischief during the paroxysm, and then maintained an obstinate silence, that no irrational words might pass her lips. None could doubt that this patient was sane, and exercised a complete self-control in the midst of structural disease.

Neither do severe injuries from external causes, though, like paralysis, they may cause a loss of those faculties which connect man with the world about him, *necessarily* disconnect him with the world within, so as to place him beyond his own command.

A case has been communicated to me illustrative of this. A young lad who had been carefully instructed in the principles of religion and virtue by the clergyman of his parish, afterwards went to sea. When he was about twenty-two he unfortunately fell from the mast upon his head on the deck, and the injury to the brain was such that he was discharged from the service in a state of imbecility, and sent home to his parish. He was then in possession of the use of his limbs and hearing: but articulation was apparently dif-

ficult to him, and collected thought, which should enable him to speak connectedly, still more so: his sight too was subject to a delusion which made him imagine he saw gold and silver coin strewed about on the ground; which, as was natural, he eagerly endeavoured to pick up. He was now visited by the Clergyman who had been the instructor of his youth, who in kind terms assured him he was under a false impression, and advised him to give no heed to what he imagined he saw. The poor young man thanked him, and promised to do as he desired, and for a time abstained from attempting to pick up the coin, but gradually the delusion became too strong for his resolution, and he recommenced.—Yet after every visit of his former instructor, he again controlled himself for a time: and, if he did not come, anxiously sought him at his own house.—He died in a few months, but during the whole time was mild and submissive, seeming perfectly aware that his mind was disordered; and, like a child who distrusts his own power, seeking to throw himself on the guidance of one whose kindness he remembered, and whose character he respected. This man was suffering mental derangement

from injury of the parts, but was not insane: for the faculties left him were rationally exercised.

13. It has already been seen that the delusions of sense may coexist with perfect sanity: the instances of this, indeed, are so numerous that I should not have time to relate half that I have heard or read of within the last three or four months: but there is another kind of mental derangement, still in a certain degree connected with sense, which is of a more fearful kind, and yet this too is not inconsistent with sanity. A case in point has been given by M. Marc which has been copied into many works on this subject. The mother of a respectable family in Germany, on returning home one day, met a servant against whom she had no cause of complaint, in the greatest agitation.—The servant begged to speak with her mistress alone; threw herself upon her knees, and entreated that she might be sent out of the house. The mistress, astonished at this request, inquired the reason, and learned that whenever the unhappy woman undressed the little child which she nursed, she was struck with the whiteness of its skin, and experienced an almost irresistible desire to tear

it to pieces.—She felt afraid that she should not have power to resist this desire, and therefore begged to be allowed to leave the house that she might be in no danger of committing so great a crime.*

Some other cases are also given by M. Esquirol where the desire to commit an atrocious act was accompanied by a full conception of its enormity; was resisted, and finally overcome.

Cases of this kind have been considered by some as a peculiar type of insanity. By French authors it is entitled *manie sans délire.* Dr. Prichard styles it *instinctive madness.* I am inclined nevertheless to refer such deranged propensities in some instances to a peculiar and morbid state of sensation, and these will come under the head we are now considering, consequently the desire is not irresistible, though strong, for we see that it has been successfully resisted:—in others I should refer it to the second class under the head of "Inefficiency of the intellectual force," and then it depends on the resolution of the person so affected whether the morbid sensa-

* Esquirol, Maladies mentales, vol. ii. p. 807.

tion shall be meditated on and indulged, and thus acquire fresh force, or whether by exciting other sensations, it shall be weakened, and by degrees vanquished.*

There is no greater error than to suppose, that thinking about a propensity which ought not to be gratified, will conquer it: on the contrary, every hour of lonely thought gives it fresh force—but let the man plunge into business that must be attended to, or even a lighter occupation, so it be an engrossing one; and do this resolutely, however irksome it may at first appear, and the very repose thus given to the diseased part, if there be disease, by throwing the whole stress on other portions of the brain, will assist in effecting the cure.

The maid-servant who sought to avoid the sight of the child, did wisely: fresh objects of attention would relieve the part subjected to a morbid affection, and in a short time it would recover its tone. If there be no disease, the self-control thus begun will gradually eradicate the depraved inclination. This cure for insanity was known long ago: Celsus recommends committing things to memory;

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* Vide Appendix D.

and every one who has given a rational attention to the subject, has been earnest in recommending application to some study which should occupy the mind without agitating the feelings, as one of the most effectual modes of counteracting morbid impressions. The constant repetition of this recommendation, shews that it must have been sometimes found effectual, and, if so, it can only be on the principle that I have advanced—namely, the existence of a power in man to direct the operation of the brain, unless it be in a state of such complete disorganization as to be incapable of any.

14. Imbecility of intellect, whether congenital or produced by subsequent injury, as in the case of the young seaman I have mentioned, is equally under the rule of the guiding power. I believe no instance has been found of incapacity so complete as to preclude moral government, if due attention be paid. I will take an instance of this from the work of the younger Pinel. A young girl, hydrocephalous from her birth, was received into the hospital of La Salpétriére, at Paris. She was sixteen years of age, but in a state of most complete brutishness: her look stupid; her limbs

as small as those of a child of six years old. She was as incapable of understanding as of acting. After the lapse of a few months a nurse, who had taken a liking to her, succeeded in teaching her first to hold the knitting needles, and then to knit; then to articulate a few words and phrases, till, at the end of a year, she could talk readily, and reply rationally to the questions that were asked her, though there was a degree of mental imbecility. A remarkable change, observes M. Pinel, since the time of her admission, when she appeared a mere senseless machine.—Wherever the mind is capable of connecting cause and effect, moral impressions may be made; therefore this unhappy child, with early culture, might have been rendered capable of self-control, and probably of a much greater advance in mental power.

15. I think I have now produced grounds for assuming that there is no one of the morbid affections of the brain and nerves, which I have placed in my first class, which *necessarily* renders the individual an irresponsible agent. There are too many authenticated cases in which a rational self-government has been exercised, even under these afflicting circum-

stances, to leave any doubt of its *possibility*. How much previous mental culture may be required to make this possible, is another question: it is sufficient for me here to establish this one great principle, that *diseases of the brain and nervous system, however distressing, may and do, where the mind has been duly cultivated, leave the individual capable of knowing right from wrong, and of seeking exterior aid to combat the effects of mental derangement consequent on disease*—a derangement of which he is either conscious at the time, or has an anticipatory knowledge of, which enables him rationally to provide against its violence.

The second class of mental derangement will afford a more melancholy contemplation. In the first we have seen man's nobler part triumphing over all the ills of the body, and vindicating his claim to an immortal nature. In the second, we shall have to look on his degradation, and to note the consequences of neglected education, of unregulated passions, of vice, of misery, and, alas that it should be so! of mismanagement also!

II.

16. It will be recollected that when I formerly treated of the functions of the brain, I shewed its constitution to be such, that in the mere animal it was little else than the recipient of sensation, by which indeed its hemispheres might be excited to something like contrivance ere the motor nerves received the impulse, but that, until the intelligent will assumed the sway over it, even in man it was merely the tool of the animal instinct:—and I added that, like all other bodily organs, it might, by disuse, become so impaired in its capability as finally to be in the state of a limb never developed by exercise, which the will strives in vain to direct. When a man has reached mature age without making any effort to render the brain subservient to the rational will, the fatigue and even pain consequent on the endeavour to obtain the mastery over it, is such that few have resolution to undergo it voluntarily. Thus the man subsides more and more into the animal, and is at last guided only by those instinctive emotions which belong to the vital force merely. His passions assume a deli-

rious violence, and he is only distinguished from the brute by the greater skill with which he pursues their gratification. There is no *disease* of brain, but it has been left unexercised and ungoverned, till it is as unmanageable as a limb that has been treated in the same way. Toes have been used for writing and other arts which are usually performed by fingers; they are *capable* therefore of such use, but those who have constantly worn shoes cannot direct one toe separately from the rest, as they can the fingers. Yet with much trouble this power of directing might be acquired. It is thus that the brain, unaccustomed to direction from the intellectual force, rebels against it, and if this latter fails to assert its sway, it may justly be termed inefficient. In a man thus animalized, the actions differ from those of his more spiritualized fellow men, who happily are more numerous; and when they find no such motive as *they* would consider a sufficient one, for his conduct, they call him mad, by way of accounting for it. He commits a crime, and the plea of insanity is set up as a shelter from punishment. I will give an instance.—It is recorded by the elder Pinel. "An only son, educated by a silly and indulgent

mother, was accustomed to give way to all his passions without restraint. As he grew up, the violence of his temper became quite uncontrollable, and he was constantly involved in quarrels and law-suits. If an animal offended him, he instantly killed it; yet, when calm, he was quite reasonable, managed his large estate with propriety, and was even known to be beneficent to the poor: but one day, provoked to rage by a woman who abused him, he threw her into a well. On his trial, so many witnesses deposed to the violence of his actions, that he was condemned to imprisonment in a mad-house."* Yet any choleric man who does in his rage what he is sorry for afterwards, is as much insane as this man was: both are under the influence of the vital force. A shock to some nerve of sensation stimulates the sympathetic system: the circulation is hurried, and the blood flowing more rapidly through the brain, gives an unusual activity to the motor nerves—the movements are sudden and violent, the speech hurried, loud, and perhaps incoherent: but the intellectual force knows the source of these symptoms, and can curb them by resolute silence and inaction

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* Pinel, Aliénation mentale, p. 156.

till the blood again flows at its usual pace: if it does not, the man for the time is in a state of mania, but is not the less responsible for having allowed himself to be so.

17. Let us suppose another case: the thing is so constantly seen, that every one could quote examples of it.—A man unaccustomed to self-control, becomes occupied by one thought:—his ambition has been disappointed perhaps, or a law-suit has plagued him, or he has been much employed in some engrossing pursuit. Unable to regulate his thoughts at will, he finds the one which circumstances have made habitual, recur uncalled for. An effort would dismiss it, for every one who has studied, knows that he has had to dismiss many an intruding thought, and with some effort too, if he wished to make progress in what he had undertaken: but this individual has never been accustomed to make any such effort, and he knows not how to free himself from the subject that thus haunts him. If it be an unpleasant one, he is wearied and worn by it; but every day that it is not driven off, it assumes a greater power, for the part of the brain thus brought into action is now by habit rendered more fit for use than any other: —he has not resolution enough to free him-

self from his tormentor by a determined application to something else which would require all his attention: he sits brooding over it, and, when life has thus become irksome, he strives to terminate his discomfort by suicide: yet here is no structural disease; and if the man could be persuaded to exert himself, he might be sane. I will give an instance. The master of a parish workhouse, about thirty years ago, was subjected frequently to groundless suspicions of peculation. Being naturally a taciturn, low-spirited man, these false accusations, which involved his character, and consequently the maintenance of his family, preyed upon his mind, and a profound melancholy was the result, attended by the usual symptomatic derangement of the digestive functions, and a constant apprehension that he had done something wrong; he did not know what. No assurance on the part of those who knew and esteemed him had any effect, and finally after some months of melancholy, he attempted to destroy himself. He was then removed to St. Luke's Hospital, whence, after a year had elapsed, he was discharged incurable. He was now placed in a private receptacle of the insane, and here suffered all the

misery which at that time pauper lunatics were subjected to. He was visited at this place by a benevolent man, who, seeing his state, immediately ordered him to be removed into the gentlemen's apartments, and paid for his maintenance there. In a few months afterwards, he was visited by the clergyman of his parish, who, on conversing with him, considered him sane. The man begged to be allowed to rejoin his wife and family, and the rector, after many difficulties and some threats to the parish authorities, succeeded in setting him free. The man from that time was able to maintain his family by his trade of shoemaking, for if ever a fit of melancholy came over him, a threat from his wife that he should be sent back to the madhouse, was sufficient to engage him to make an effort to resume his cheerfulness, and he remained to old age a sane man. Here the insanity had been merely *inefficiency of the intellectual force.* Placed in a situation of comparative ease, his mind had become calm; the wish to return to his wife and family, and the hope of it, kept up by the visits of benevolent friends, did the rest; for, be it observed that during the whole time he never felt himself abandoned.

18. The poor and the uneducated are the classes which most usually suffer from the *inefficiency* of the intellectual force: it is among the higher ranks usually that its *misdirection* is a source of insanity. Among these, more distant objects of pursuit keep the thoughts longer upon the stretch towards one point; the organs of mechanical memory are strengthened, nay, even strained by the habit of learning much by rote, while the constant supply of learning ready-made leaves no necessity for the more laborious processes of reasoning and comparison. Hence we not unfrequently find an elegant scholar, who can readily quote the words and opinions of others, unable himself to carry on a course of close argument, or to *prove* the truth of what he advances. Whoever has moved in society, knows that it is rare to meet with any one who can command his thoughts in conversation sufficiently to reject all that is not relevant to the subject, so as to keep on the chain of reasoning unbroken.

When the mind is thus exercised in remembering the opinions of others, thus unaccustomed accurately to examine its own, what wonder is it if it should become prepossessed

with some irrational notion which cannot be removed by reasoning, because the individual man in his healthiest state had never chosen so to exercise his mind; or if, when a delusion of sense occurs, he should choose rather to act upon it as truth, than to examine into the grounds he has for believing it to be such. It is a melancholy fact, that a great number of mankind are in this state as regards the faculties most requisite to self-control, and depend far more on the accident of good health, than the exertion of their own intellectual power, for their sanity. I have heard of more than one instance of *hard livers*, as they were termed, who probably in consequence of a slight affection of the brain from the unnatural stimulus of wine long kept up, became possessed with an opinion that they were slighted by one or more of their friends; and, resisting all reasoning on the subject, ended by destroying themselves. Yet, they were rational on other matters of importance, and therefore it is to be concluded, that, even on this point they were capable of being rational also, had they chosen to make the exertion. It is recorded of Henri of Bourbon son of the great Condé, that at times he imagined himself transformed

into a dog, and would then bark violently. Once this notion seized him whilst in the King's presence: he then felt it needful to control himself, and he did so: for though he turned to the window and made grimaces as if barking, he made no noise.* Had the King's eye been upon him, it is probable that he would have avoided the grimaces also.

19. Insanity from *misdirection* of the intellectual force is so various in its forms, that it would be impossible to give instances of all; but it has one very general character—namely, that at first there are very few symptoms, if any, of structural disease. Some derangement of general health may be observed, but even this is not constant, or, at least, not sufficient in many instances to excite attention: it seems therefore not unreasonable to conclude, that the evil originates rather in the misuse than in the impairment of the organ. Thoughts too long and too intensely fixed on one object, weary the part of the brain so employed, and we usually then seek relief by varying our occupation: if this is not done, the weariness may end in disease.

* Pinel, Aliénation mentale, p. 393.

I remember being told by a friend, that having determined to commit to memory a certain number of Greek primitives every day, after persisting some time, he found that though competent to other study, *this* wearied him. Resolved not to be thus mastered, he persevered in spite of weariness, but in a short time delirium came on. He took the hint, laid aside the Greek primitives, and recovered himself very quickly. Here the misuse of the organ had produced temporary disease: had the subject been one not so easy to lay aside, the temporary disease might have become permanent; especially if the engrossing thought were one originating in instinctive emotion which always influences the circulation largely, and thus is likely to induce an unnatural rush of blood through the brain.

"The indulgence of violent emotions," observes Dr. Conolly, "is singularly detrimental to the human understanding—and it is to be presumed, that the unmeasured emotions of insanity are sometimes perpetuated in consequence of the disorder of brain originally induced by their violence. A man is at first only irritable, but gives way to his irritability. Whatever temporarily interferes with any

bodily or mental function, reproduces the disposition to be irritated, and circumstances are never wanting to act upon this disposition till it becomes a disease. The state of the brain or part of the brain, which is produced whenever the feeling of irritation is renewed, is more easily induced at each renewal, and concurs with the moral habit to bring on the paroxysm on every slight occasion—other vehement emotions and passions effect the same disorders of the mind."

Time will not allow me to do more than quote the conclusions drawn by this very able writer from his preceding observations. "Seeing that any feeling in excess may become independent of the restraint of the comparing powers, and thus impair or disorder the understanding, we cannot but remark the importance of cherishing that governing and protecting action of the mind by careful cultivation and exercise. Whoever will converse with lunatics, will soon be satisfied that a very small portion of them consists of persons whose talents have been regularly and judiciously cultivated" *—for "those who most

* Conolly's Inquiry concerning the Indications of Insanity, p. 102.

exercise the faculties of their minds are least liable to insanity, and nothing is rarer than to find a mad mathematician: for, as no study demands more attention than mathematics, so it secures the student during a great part of his time, from the recurrence of feelings which are always the most imperious in those who are the least occupied."*

20. The diseases which come under the last division of my classification are the most discouraging, for here either the organs requisite to correct perception are wanting, or there is adhesion or other disease which impedes their action. Yet even among those apparently hopeless cases, we find such unequivocal symptoms of a struggle between the intellectual force and the defective organs, that it becomes *probable* at least, that this very struggle may be made to operate beneficially on the diseased parts, as we find a palsied limb benefitted by the attempt to use it. M. Esquirol in his work "*les Maladies mentales,* observes that among his idiotic patients at Charenton, he had generally found a physical difficulty in fixing the attention even where there was a

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* Ibid, p. 347.

wish to do so. In other words, the organs did not respond to the will which endeavoured to direct them. He mentions that he had wished to have plaster casts of the heads of many of his patients, and that with the maniacs he had succeeded. Even the most furious had consented to keep quiet long enough for this purpose:—a strong proof, by the by, of the immense power of the intellectual will even in such cases, if a motive can be found strong enough to induce its exertion—but the idiots could never keep their eyes shut, and themselves quiet, long enough to complete the operation, though they were anxious to do so. "I have seen some," says he, "who wept because the casts had not succeeded, and undertook afresh and for several successive times to remain quiet, but always in vain."* I have myself heard of an instance of a girl of weak intellect who wept bitterly because she could not learn as others did. There can hardly be a doubt, that in these cases moral training, which happily requires no great effort of memory or stretch of thought,

* Esquirol, Maladies mentales. Vol. i. p. 21. Vide Appendix E.

might be perfectly practicable. The strong will is there; imprisoned indeed, with scarcely a glimmering of light from this lower world, but it is still potent, and I have had more than one case communicated to me, where, though the individual possessed not enough of intellect to be entrusted with the management of the most trifling affairs, his moral sense seemed unimpaired, and his conduct was exemplary. In one instance, the father was a blacksmith; and the imbecile son had been taught to strike with the great hammer, which he did perseveringly when told to do so, and thus earned a subsistence, though his limbs had the usual shambling movement of idiots, and though he was scarcely able to express his meaning by words. On one occasion he accidentally killed a neighbour's goose by throwing a stóne—he was inconsolable, and could only be pacified by the fullest restitution to the owner. In this case, the intellectual force had been wisely employed to counteract the natural defect, for the man became more and more capable as years passed on; and finally having earned enough to supply his frugal subsistence and allow of saving besides, he spent the last years of his life in repose—a

respected member of society—for though his mental deficiency was known, he was honoured for the worthy use he made of the little capacity he possessed. Such probably might have been the happier history of many an unfortunate being now abandoned to a state of brutalism, if those about him had done their duty towards him in early life.

III.

21. Of course in the investigation of a subject which might occupy a year more fitly than an hour, I have had to select my information, and compress it into the smallest possible space: yet I cannot but flatter myself that I have given enough to bear out my opinion, that man has in the resources of his own nature the antagonist power which, if properly used, can set at naught the evils, ay, and the so called irresistible propensities too, of the bodily organism. So nicely balanced indeed is the machine, that a grain can turn it to either side, but it is in the power of the will to cast that grain. Cast on the side of instinct, the propensity becomes passion, and the passion crime, and both are for the time

insanity:—For when once the intelligent will has lent its force to the blind impulses of the body, whether diseased or in health, it becomes only a question of time whether the individual is to be called insane and placed under restraint or not.—The man who recovers quickly from his madness is called a sane man, though during the few preceding minutes or hours he may have exhibited the flushed face, the rapid and violent language and gestures, and the unreasoning conclusions of a maniac: but, strange to say, if this be very frequent, he is excused and considered innocent of the crimes he perpetrates, exactly because he has committed the greatest of all crimes by delivering over his godlike intellect to be the sport of that brute nature which it ought to regulate. There can hardly be a stronger proof of the necessity of some such classification of mental derangement as I have proposed.

22. It is observed by those professionally conversant with the subject, that up to fifteen years of age cases of insanity are very rare:—after that period, and during the period of maturity, they are frequent—so frequent, that statistical reports give a proportion of one in

between six and seven hundred of the whole population of England of persons so affected. As far as regards age, the statistics of crime give us nearly the same results as those of insanity.—I have been informed by two gentlemen who had large opportunities of observation, one in a manufacturing, the other in an agricultural district, that sixty per cent of the offences attended with violence which have come under their notice, have been committed by persons between fifteen and thirty—to which we may add that crime and insanity generally keep pace. During the French Revolution of 1793, when men were let loose to commit all sorts of violence, insanity increased to a frightful extent: with the restoration of order, it again decreased; and in England I believe it will be found that in proportion as criminals have become more numerous, the registers of lunatic asylums shew that the numbers of their inmates have also increased. Something must be allowed for the larger population: but even where that is allowed for, I am afraid we shall find that both are growing evils.

23. Even had we paid no attention to the symptoms and the state of the mentally de-

ranged, this parallelism would give some cause for inquiry whether the two might not be in some way connected: and if, as I have inferred from a close examination of cases, violent and unreasonable insanity is most frequently the result of either a frivolous and ill-governed mind, or of loose moral principles; for excesses of all kinds affect the brain fearfully*—then the connexion between the two becomes sufficiently apparent, and the remedy for both would be a sound and moral education. A brain strengthened by rational exercise, *not* merely by committing words to memory, but by applying the power of thought to whatever subject is presented, and neither exhausted nor loaded by irregularities of life, is but little likely to be attacked by disease: but if it be, mental derangement may occur, but not mischievous insanity: and thus the larger half of the evil is removed.

24. But how has the danger of such a calamity, frightful as it is, been met by poor and rich?—A country with an extensive frontier exposed to invasion from powerful enemies, if its governors be wise, erects fortifica-

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* Vide Appendix F.

tions, forms strong alliances, and disciplines its inhabitants in the use of arms. Every child is in the situation of such a country,—but are its governors wise? Where are its fortifications of mental occupation—its alliance with a better world—its discipline of self-control?—The reports of commissioners lately made public, have given a fearful answer to the question as regards the poor.—Are the rich better cared for? What advantage does the child receive from its educated parents? Its clothing is finer, its food more delicate; but during those six precious years when the brain is acquiring the bent which may form the character through life, it is consigned to the nursery: to the companionship of uneducated and misjudging, perhaps vicious, at any rate, uninterested persons: shut out, even more than the children of the poor, from the experience of life, with no conversation to stimulate the young brain to further developement, no principles instilled, no curiosity gratified. A dull routine of lessons is perhaps carried on, taxing the tender organ beyond its powers—thus inducing instead of preventing disease, while the inquisitiveness, which seems the very instinct of childhood,

and the attempt to reason on what is propounded, are sternly repressed: obedience, not *self*-management is enforced: and the child grows up, notwithstanding the *shew* of learning or accomplishment, with an unregulated mind, ignorant of man's best knowledge, motiveless, and dependent on circumstances. The boy is then to be sent forth into a world full of difficulties, to sink or swim: to make a character for himself if he can:—As well might troops begin to make their muskets when the enemy is in sight.

25. But if this be the case as regards the male sex, how much more fearfully then is it of the female! Here the Drawing-room but perpetuates the inertness of the Nursery,—and woman, so largely endowed by nature, is degraded by social prejudice, and the frivolous education consequent upon it, till she is left at the mercy of events, the creature of impulse and of instinct. Yet physiologists have demonstrated that the organs of thought are proportionably larger in woman than in man:* and many a bright example has shewn how well they *can* be employed. One plain statistical fact shows that no terms that I can

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* Vide Appendix.

use in the reprobation of this cruel system can be too strong. The registers of Lunatic Asylums show the number of female patients to exceed that of males by nearly one third.* —We have the assurance of professional men well experienced in the treatment of the insane, that nothing is more rare than to find among them a person of a judiciously cultivated mind; and yet, with this fact staring us in the face, we systematically consign the mothers of the rising generation to a species of training which leaves them and their families a prey to one of the worst ills that flesh is heir to. We need not ask what woman's destination is—nature has written it in characters too clear to be mistaken: the large development of the intellectual organs, and the feeble muscular power, mark her for the high-minded purifier of society—her strength must be that of knowledge:—yet, we refuse the kind of culture which such an organization requires, hide the victim of mis-management in a madhouse

* Webster's *Observations on the Admission of Medical Pupils to the Wards of Bethlem Hospital*, p. 52. Though the observation is there made on the registers of the Hospitals and Asylums for Lunatics in France, it holds good equally with respect to England.

—and then talk proudly about an enlightened age!

26. Should my position, that the difference between sanity and insanity consists in the degree of self-control exercised, appear paradoxical to any one, let him note for a short time the thoughts that pass through his mind, and the feelings that agitate him: and he will find that, were they all expressed and indulged, they would be as wild, and perhaps as frightful in their consequences as those of any madman. But the man of strong mind represses them, and seeks fresh impressions from without if he finds that aid needful: the man of weak mind yields to them, and then he is insane.

That this is the true view of the case, may be proved from the innumerable cases where insanity has been cured, not by any medical treatment, but by fear of what was unpleasant; or some deep impression which sufficed to counteract the former one. Dr. Conolly mentions that in the Glasgow Lunatic Asylum, a patient afflicted with religious melancholy had made up his mind to destroy himself, but that a short passage from the Scriptures, impressively and kindly spoken to him, not only

prevented the commission of suicide at the time, but had the effect of permanently checking the tendency to it. The same dreadful thoughts frequently returned to the patient's mind, but the recollection that "no murderer hath eternal life" returned also, and the crime was refrained from.*—This man then had the power to restrain himself: yet had those words never been spoken, and had he committed suicide, he would have been held insane and incapable of doing otherwise.—I must not multiply examples, though it would be very possible, but will merely quote the words of a Physician in extensive practice, lately addressed to myself.—"I completely coincide with you in opinion," says he, "as to the power of the will in suppressing the manifestation of insanity—a fact sufficiently illustrated by the dexterity with which the insane contrive to conceal their delusions; of which I, in common with others, have seen many examples. I have often observed with astonishment that when patients are put upon their guard, or have any purpose to achieve, they will keep their hallucination out of sight

* Conolly's Inquiry, &c. p, 25.

in a most surprising manner. What is now fashionably termed *monomania,* is more often owing to a want of moral control over the mind than to any unsoundness of the intellectual faculties: so that in fact it ought to be viewed as moral depravity rather than mental disorder." This is strikingly exemplified in a case recorded by M. Georget, of a young man seventeen years of age, who, after committing all sorts of outrages, finished by murdering his father. On seeing the dead body of his parent a short time after, he addressed it with —"Ah, my dear father, where are you now?" —and after some other remarks he concluded —"It is you and my mother who have caused this misfortune—I foretold it you a long time ago:—but if you had brought me up better, it would not have been thus."*

I may add in corroboration of the opinion here expressed that instances are by no means rare, when the post-mortem examination in cases of decided and violent insanity, has exhibited no apparent sign of disease in the brain; a circumstance which of course would lead to a suspicion that the morbid affection

* Georget, Discussion Médico-légale sur la Folie, p. 144.

was rather functional than structural. It has been observed to me by a distinguished friend, who formerly filled the office of Secretary of State in the Home Department, that the increase of crime has generally been in the ratio of the want of employment for the people; and that it is probable that the same cause may operate towards increasing insanity. A mind kept on the stretch with thinking how the next meal may be provided, or sunk in the apathy which, among uncultivated people, the lack of any call upon the attention is apt to produce, may well operate in diseasing an organ which will neither bear too much exercise nor too little.

27. The result then of the whole inquiry appears to be, that man being a compound of two natures, mental derangement is of two kinds. In the one kind, structural disease deadens or distorts the perceptions, and if this extends itself to the organs of all the faculties, the intellectual force having no longer the means of external action, the individual remains to all appearance a helpless machine. But, as such extensive structural disease is hardly compatible with life, so it is of very rare occurrence, and, if any part of the

organ remain perfect, then there is good reason to hope, that a mind thoroughly well-trained in early years, will still contrive to make the little that is left available to conduct, if not to the higher intellectual functions: as we see the loss of the right hand replaced in some degree by the increased activity of the left.—But in the other case, no structural disease exists in the first instance, and the inefficiency or misdirection of the intellectual force is the sole cause of derangement: sometimes by the violence of the excitement producing disease, sometimes, as I have already noticed, continuing to the last without affecting the bodily organs.

28. The cases of insanity, we are told, have nearly tripled within the last twenty years!—a fearful increase even after allowing to the utmost for a larger population!—of these cases it is calculated that less than three hundred * in one thousand are the result of disease, or of unavoidable circumstances, thus leaving above seven hundred resulting from bodily excess or mental misgovernment.—On the heads then of legislators, of teachers, and of

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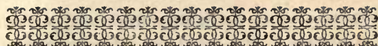
* Vide Appendix H.

parents, lies the heavy charge of having in all these instances, left those godlike faculties uncultivated, which, if duly used, might make earth the ante-room of heaven, and man the fit Vice-gerent of the Deity in this fair world. What man *is* generally, and what the world is in consequence, I need not detail.—We all know and feel it. Would to heaven we all knew what man *can* be, and had felt what the world might be were he such!



APPENDIX.

A.

"A STRIKING instance is on record, which does not on first sight seem to admit of explanation. It is that of Nicholai, of Berlin, related by himself to the Royal Society of that city in 1799. He was a man of much imagination and great industry; during the year 1790, he had been subjected to causes of great anxiety and sorrow; and it would seem that he had that year also neglected to lose blood by venesection or leeches so frequently as for some years, in consequence of vertigo and other complaints resulting from studious and sedentary habits of life, he had been accustomed to do. Early in February, several incidents of a disagreeable nature occurred to him; and on the 24th of that month he relates :—' At ten o'clock in the forenoon my wife and another person came to console me: I was in a great perturbation of mind, owing to a series of incidents which had altogether wounded my moral feelings, and from which I saw no possibility of relief; when suddenly I observed at the distance of ten paces

from me a figure, the figure of a deceased person. I pointed at it, and asked my wife whether she did not see it. She saw nothing, but being much alarmed, endeavoured to compose me and sent for a physician. The figure remained some seven or eight minutes, and at length I became a little more calm.'—'In the afternoon a little after four o'clock, the figure, which I had seen in the morning, again appeared. I was alone when this happened: a circumstance, which, as may easily be conceived, could not be very agreeable. I went, therefore, to the apartment of my wife, to whom I related it. But thither also the figure pursued me. Sometimes it was present, sometimes it was absent, but it was always the same standing figure.'—'After I had recovered from my first impression of terror, I never felt myself particularly agitated by these apparitions, as I considered them to be, what they really were, the extraordinary consequences of indisposition: on the contrary I endeavoured as much as possible to preserve my composure of mind, that I might remain distinctly conscious of what passed within me. I observed those phantoms with great accuracy, and very often reflected on my previous thoughts, with a view to discover some law in the association of ideas, by which exactly these or other figures might present themselves to the imagina-

tion.' 'The figure of the deceased person never appeared to me after the first dreadful day, but several other figures showed themselves afterwards, very distinctly; sometimes such as I knew, mostly, however, of persons I did not know; and amongst those known to me were the semblances of both living and deceased persons, but mostly the former: and I made the observation that acquaintance with whom I daily conversed, never appeared to me as phantasms: it was always such as were at a distance. When these apparitions had continued for some weeks, and I could regard them with the greatest composure, I afterwards endeavoured at my own pleasure to call forth phantoms of several acquaintance, whom I for that reason represented to my imagination in the most lively manner, but in vain.'—'The phantasms appeared to me in many cases involuntarily, as if they had been presented externally like the phenomena of nature, though they certainly had their origin internally; and at the same time I was always able to distinguish, with the greatest precision, phantasms from phenomena. Indeed I never once erred in this, as I was in general perfectly calm and self-collected on the occasion. I knew extremely well when it only appeared to me that the door was opened, and a phantom entered, and when the door really was opened, and any

person came in.' These figures appeared to Nicholai when alone or when in company, or even in the street, and continued to haunt him for about two months:—at last they disappeared; sometimes returning for a time, and lastly, during the time in which he was writing an account of them. (Nicholson's Journal of Natural Philosophy, Chemistry, and the Arts, vol. vi. p. 161). A correspondent in the Journal from which I have quoted the case of Nicholai, describes himself as having been the subject of such hallucinations during an attack of fever: he saw innumerable faces all very agreeable—but fancying that these appearances indicated a breaking up of the system, and that the confusion of his senses was but the precursor of his speedy destruction, the spectra assumed a character associated with this uncheering belief; and instead of the very prepossessing faces which had before visited him, he beheld a visage of an enraged expression, which seemed to belong to a figure which pointed again at him. The patient began to perceive the influence which his thoughts had upon his waking visions, and voluntarily directed them towards architectural recollections and natural scenery; and, after some time, a corresponding change came over the appearances which were presented to him.—He then turned his thoughts towards music, and dreamed during

a short sleep that a cat leaped upon his back, and awoke him with shrill and piercing screams. The sleeping and the waking dreams were thus plainly enough proved to be formed very much in the same manner.

"A distinguished physiological writer of our own country has related something similar which occurred in his own person. 'I was labouring,' he says, 'under a fever, attended with symptoms of general debility, especially of the nervous system, and with a severe pain of the head, which was confined to a small spot situated above the right temple. After having passed a sleepless night, and being reduced to a state of considerable exhaustion, I first perceived figures presenting themselves before me, which I immediately recognized as similar to those described by Nicholai, and upon which, as I was free from delirium, and as they were visible for three days and nights with little intermission, I was able to make my observations. There were two circumstances which appeared to me very remarkable; first, that the spectral appearances always followed the motion of the eyes: and secondly, that the objects which were the best defined, and remained the longest visible, were such as I had no recollection of ever having previously seen. For about twenty-four hours, I had constantly before me a human figure, the features and

dress of which were as distinctly visible as that of any real existence, and of which, after an interval of many years, I still retain the most lively impression: yet neither at the time nor since, have I been able to discover any person whom I had previously seen who resembled it. During one part of this disease, after the disappearance of the stationary phantom, I had a very singular and amusing imagery presented to me. It appeared as if a number of objects, principally human faces or figures, on a small scale, were placed before me, and gradually removed, like a succession of medallions. They were all of the same size, and appeared to be all situated at the same distance from the face."—(Dr. Bostock's System of Physiology, vol. iii. p. 204). *Conolly's Inquiry concerning the Indications of Insanity, p.* 105. *et seq.*

B.

"I USED frequently to see a poor maniacal creature, in whose malady there were many intervals of sanity: and during these intervals she would grievously complain of the annoyance she experienced from simultaneous illusions of sight, smell, hearing, and general sensation: all kinds of animals seemed to be scampering before her; the smell of brimstone,

and the continual sound of singing voices conspired to trouble her, and with all this her expression used to be that she felt "*still*, and as if she could die at any moment," yet she was at such times quite conscious that her sensations were diseased, and was of sane mind: she could exercise her observation on others, and by comparison of their unconcern with the false images which her senses figured to be around them, remain convinced that the images were unreal. It may be remarked by way of example, that in a fever the patient's bed will seem in flames: or voices will whisper in his ear, &c. If we talk with patients thus affected, some will tell us, in a very quiet way, that they are thus tormented; others will seem confused, and make a visible effort of sight and hearing before they tell us how they are troubled; and others will tell us what they see, and what they hear, with an expressed belief, on their part, of the reality of what we know to be delusion. Of these three classes of patients, the last are in a state of delirium, the second are approaching to it, the first are in a state of sound mind." *Conolly's Inquiry, &c.* p. 115.

C.

A CURIOUS instance of the effect of fear in the control and final cure of insanity will be found in the treatise on *aliénation mentale* in the Dictionnaire de Médecine et de Chirurgie pratiques, p. 576. I quote the words of the author M. Foville, " J'ai vu les préparatifs de cette application (cautère actuel à la nuque) causer une frayeur extrême à une jeune maniaque qui jusque là n'avait pas eu un instant de connaissance. Lorsqu'elle se sentit touchée par le fer rouge, elle fit de tels efforts pour se soustraire à son action qu'elle échappa aux mains de plusieurs personnes employées à la contenir. Pendant cinq minutes, elle jouit de toute sa raison, demanda ce qu'on voulait d'elle, pria avec instance qu'on l'épargnât. M. Esquinol lui dit qu'il consentait à différer l'application du cautère actuel à condition qu'elle se conduirait raisonnablement, qu'elle se mettrait au travail. Elle le promit, et tint parole ; elle fut immédiatement transférée dans la division des convalescentes, où la guérison devint parfaite en peu de temps." He adds " Elle avoua, quand elle fut guérie, que la frayeur causée par le fer rouge avait plus que toute autre chose contribué à ramener sa raison." The author of this treatise adds farther that the actual cautery had no

beneficial effect in any cases where the pain was not felt; so that it is evident that, in the cases where it succeeded, the success was owing to the stimulus it gave to the will of the patient, who, till then, had been too indolent to exert its full power over the brain. Another case is given by M. Pinel to exemplify the use of the Douche, not only as a punishment, but also as a means of suddenly diverting the thoughts of the patient from the subject which is engrossing them. A woman of strong constitution who had been mad at intervals for ten years, was most violent; struck every one around her, tore in pieces her clothes, bed clothes, &c., and was perfectly unmanageable. On her admission into the Saltpétrière, as soon as she began tearing every thing around her, a strong douche was applied, and she was fastened down in her bed by a straight waistcoat. As soon as she entreated for pardon she was released; and on a relapse the same means immediately re-adopted. She became better, but the physician, under whose superintendence alone these measures were allowed to be used, fell ill during twelve days. The patient relieved from all fear of punishment fell into her old ways, and was as bad as ever. The doctor then took his place again, and threatened to punish her, of which she took no heed. She was conducted to the

bath, and had a strong douche of cold water, during which the doctor spoke to her strongly, but without anger, and told her she would be still more severely treated. She shed a torrent of tears, became quite calm, and was soon after cured.

These persons so capable of exerting mental self-control, when thus urged to it by fear, needed not to have been mad at all: the same resolution that at last *cured*, would have *prevented* madness, had it been exerted.

D.

I SHALL here give a case which M. Georget has recorded in his "*Discussion médico-légale sur la folie*," on the authority of M. Marc. From this case, and others of the same kind, he infers that there is a degree of mental disease; "qui ôte à l'homme sa liberté et le porte à commettre des actes repréhensibles . . . il existe une monomanie homicide," and I give it for the sake of showing the fallacy of the reasoning by which he arrives at that conclusion. In this case (Discussion, &c. p. 39) a woman, aged about thirty, cut off the head of a child four years old, the daughter of a poor man, who was driving her and this child in a cart. She had the day before prevailed on the man to give the child

the drive, and she got him out of the way on some pretence while she perpetrated the crime.

It appeared on inquiry that there was a litigation pending between this woman and a serjeant's wife; that the latter had obtained a warrant against her; that, flying from the officers of justice, she took refuge with a person with whom she was slightly acquainted, and whose hospitality she obtained on this occasion on some false pretence; that, while she was considering in what direction she should proceed, being determined not to return home, the idea of murdering the children of her entertainer occurred to her; from this plan she was however diverted by the thought of the ingratitude of such a proceeding. She then resolved on selecting some other child for the same purpose, when this peasant offered her a seat in his cart to the village. She found out that he had an only daughter, whom she resolved on assassinating on the following strange reasoning. "L'enfant du paysan est fille unique; moi aussi je suis fille unique, et j'ai toujours été très malheureuse. Un semblable sort est peut-être réservé à cet enfant; en conséquence, il vaut autant que ce soit lui que je tue qu'un autre." For this purpose she stole a knife from her host, and sharpened it carefully that her victim might suffer the least possible pain. There was evidence

that she had previously been deranged, and she was acquitted on the score of insanity.

Now it is observable, in this case, that so far from being under an irresistible influence, this woman could control herself. She felt the moral turpitude of killing the children of her benefactor, and she abstained from the act:—she was, therefore, capable of resisting the impulse if she chose to exert a small share of resolution. The primary cause of the disposition to murder may probably be found in that peculiar state of the nervous system described by Dr. Conolly. "In any general excitement of the nervous system," he observes, "it is not uncommon to find irritation referred to the extremities of nervous ramifications. The susceptible child, when interested with its book, bites the ends of its fingers; the nervous man in a state of anxiety or emotion does the same. The approach of maniacal disorder is sometimes indicated by a disposition to bite, cut, and tear the fingers. The injuries and wounds inflicted on themselves by lunatics are often to be similarly accounted for."—(Conolly's Inquiry, &c. p. 98.) Instead therefore of the "*monomanie homicide*" of M. Georget, which "ôte à l'homme sa liberté,"—it would appear simply that excitement of the brain produces an extraordinary irritation of the nerves, which leads to cutting or tearing whatever comes in

the way of the person so excited; but that nevertheless this disposition is under the control of the will: and the patient might generally, if previously well disposed, claim exterior aid to control this irritation, if he found it growing too strong for self-government.

E.

IT is observed by Professor Tiedemann, that "the brain of men endowed with but feeble intellectual powers is often very small; particularly in congenital idiotismus. The brain of an idiot fifty years old, weighed but 1*lb.* 8*oz.* 4*dr.*, and that of another, forty years of age, weighed but 1*lb.* 11*oz.* 4*dr.* The brain of a girl, an idiot, sixteen years old, weighed only 1*lb.* 6*oz.* 1*dr.** The brain of men who have distinguished themselves by their great talents, on the contrary, is often very large. The brain of the celebrated Cuvier, weighed 4*lbs.* 11*oz.* 4*dr.* 30*gr.*"† As in the above cases of idiocy, the weight of brain scarcely exceeds that of a new born child, it is to be presumed that by some means it has been arrested in its growth.

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* Troy or Apothecaries weight.

† Phil. Trans. 1836, part 2, p. 502.

F.

M. FOVILLE, in his Anatomie pathologique, in noticing the "*altérations chroniques de la substance corticale,*" gives a case which I shall again quote in his own words: "J'ai observé cette altération au plus haut degré d'intensité chez un jeune homme d'une *constitution détériorée par des excès de tout genre ;* une émotion vive détermina chez lui l'explosion d'une aliénation mentale compliquée, de son début, de paralysie générale; quelques semaines suffirent pour porter au plus haut point la dégradation morale et physique. Dans les derniers temps de la vie la maigreur, déjà très prononcée, fit de nouveaux progrès si rapides, qu'en trois jours les globes oculaires étaient véritablement retirés au fond des orbites, tandis que les paupières étaient restées tendues demi ouvertes, quelques lignes au devant des yeux. La substance corticale des convolutions très brune, très humide, d'une mollesse diffluente cédait au plus léger contact. La perte de substance, les inégalités produites par l'apposition des doigts ou d'un linge disparaissaient en un instant comme cela aurait lieu à la surface d'un corps qui entrerait en fusion. D'ailleurs chez ce malade la substance blanche était elle

même profondément alterée d' une manière analogue à la grise."

Another analogous case is given in the Répertoire de M. Baillarger, where a "garçon marchand de vin," aged thirty, was received into an hospital for lunatics, May 23, 1827, after having led a life of great excess and profligacy, to which the state he was then in was attributed. "La mémoire et le jugement étaient fort affaiblis. Il avait de la difficulté à parler, beaucoup de lenteur et de roideur dans la marche, mais pas précisément de délire maniaque ni d'incohérence dans les idées." He was in the Bicêtre six or eight months; the paralysis and the difficulty of walking increased, he was attacked with scurvy, and died in January. *Post-mortem examination*—Le feuillet cérébrale de l'arachnoide et la pie-mère réunis sont d'un mineure extrême. Ces deux feuillets ne sont ni injectés, ni adhérents à la surface du cerveau, les deux substances du cerveau, du cervelet, et des moelles, sont fermes, mais pâles et décolorées et ne contiennent pas de sang. La teinte de la substance corticale est d'un gris légèrement jaunâtre. Les deux feuillets de l' arachnoide rachidienne sont unis dans toute leur étendue par de très petites adhérences extrêmement minces et transparentes. Il y a une grande quantité de sang infiltré dans le tissu cellulaire du canal rachidien."—*Annales médico-psycholo-*

giques, Janvier, 1843. *Répertoire, p.p.* 180. 181.

Would space permit, instances of this kind might be lamentably multiplied.

G.

PROFESSOR Tiedemann, in an elaborate paper published in the Phil. Trans. for 1836, part 2, on the brain of the negro, takes occasion to notice the comparative weight and size of the brain in Europeans, both males and females. The parallelism is incomplete; I can therefore only cite a few examples from the table given by him. The weight indicated is Troy or Apothecaries weight.

Sex.	Age.	Weight of Body.				Weight of Brain.				Weight of Brain as compared with that of the Body.
		ib.	oz.	dr.	gr.	ib.	oz.	dr.	gr.	
Male	New-born	7	3	2	8	1	1	1	10	as 1 : 0·63
Female	Ditto	7	2	0	0	1	0	4	40	1 : 6·83
Male	Fifteen	100	7	0	3	4	6	0	0	1 : 24·70
Female	Thirteen	63	2	6	23	3	6	·2	30	1 : 17·93
Ditto	Sixteen					3	10	2	0	
Male	Thirty					3	11	7	0	
Female	Ditto					3	11	0	0	
Ditto	Ditto	123	4	2	25	3	7	0	0	1 : 34·42
Male	Fifty	132	8	4	35	3	10	7	5	1 : 33·96
Ditto	Ditto	181	8	2	0	4	1	0	10	1 : 44·47
Ditto	Ditto	141	1	0	0	3	8	1	40	1 : 37·76
Female	Ditto	134	6	2	57	3	4	0	40	1 : 40·27
Ditto	Sixty	135	11	0	0	3	5	5	0	1 : 39·18
Male	Sixty-one					3	7	4	0	

Here it will be seen that the female brain is frequently, relatively to the size of the body,

somewhat larger than the male, and the Professor observes hereupon "Although Aristotle has remarked that the female brain is absolutely smaller than the male; it is nevertheless not relatively smaller, compared with the body; for the female body is in general lighter than that of the male. The female brain is for the most part even larger than the male, compared with the size of the body."

Dr. Fletcher, in his Rudiments of Physiology, observes that "the size of their brain as compared with their spinal marrow is somewhat greater in females than in males. Hence we might be led to conclude that in reality it is not their faculty of thinking, but their materials for thought, which are less than in males." Whether therefore we consider the size of the brain relatively to the size of the body or relatively to the size of the nerves, which go to make up the spinal marrow, we find the female brain has very commonly a trifling advantage over that of the male. It was indeed to be expected that the inferior muscular power should have a compensation; as we find that in animals deficient in strength, superior skill in contrivance is usually given as a defence.

H.

IN one thousand male patients the causes of insanity have been referred as follows:

Cause	Number	Cause	Number
Epilepsy	78	Misfortunes	69
Born Idiots	71	Chagrin	54
Old Age	69	Love	47
Accidents	39	Religious enthusiasm	29
Poisonous effluvia	17	Political events	26
Malformation	4	Ill-usage	12
Drunkenness	110	Crimes, remorse, and despair	9
Consequences of disease	100	Pretended insanity	5
Ambition	73	Other and unknown causes	115
Excessive labour	73		

IT may be as well here to add, lest any misunderstanding should arise, that the author, in giving his classification of insanity, has only endeavoured to sketch a broad outline, leaving the shades of difference, and the details generally, to be filled up by those whose professional experience enables them to do so with greater precision.—Every one who has attempted to classify any subject knows how one division blends into another, and how often even a plant is with difficulty adjusted into its proper place. —Much more must disease become complicated in its details, where two dissimilar forces are in action together, at once influencing and disturbing each other.

C. WHITTINGHAM, CHISWICK.

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